

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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A Good Thing Acknowledged.

The Manufacturers' Record is in regular receipt of letters from its advertisers and its other readers acknowledging the value of it as a medium for the placing of wares and as a worker of signal success in its particular field. Two of them received during the past week follow. Mr. R. Bee Leiby, secretary and treasurer of the Bailey-Leiby Company, machinery and supplies, of Charleston, S. C., writes:

We have found after eight or ten years' experience in advertising that your paper is the best advertising medium we have been able to get hold of.

In similar strain is a letter from the Southern Lumber & Timber Co. of Norfolk, Va., which says:

We feel assured that there is no publication which is more interesting to business men, especially to those who are interested in the progress of the South, than the Manufacturers' Record, and we find that it is not only a necessity, but also a luxury.

Exports of Manufactures.

The part played by the United States in the world's industrial history is well described in the annual report of the chief of the bureau of statistics of the Treasury Department. He shows that the total value of imports of merchandise in the fiscal year ended June 30 was \$849,714,670, and of the exports \$1,349,186,371. He characterizes as the four great facts of the commercial year:

The total commerce of the year surpasses by \$319,729,250 that of any preceding year, and for the first time in our history exceeds \$2,000,000,000.

The exports exceed those of any preceding year, and have been more widely distributed throughout the world than ever before.

Manufacturers' materials were more freely imported than ever before, and formed a larger share of the total imports.

Manufactured articles were more freely exported than ever before, and formed a larger share of the total exports.

He also points out that every great class of articles in exports showed a larger total than in the preceding year; every class in imports except manufacturers' materials showed a smaller percentage of the total than in the preceding year, and manufacturers' materials showed a much larger total and a

larger percentage of the grand total than in any former year. The value of exports of manufactures was \$432,284,366, an increase over 1899 of \$92,608,808, and nearly one-third of the total exports. Here are figures which should inspire all Americans to renewed and greater exertions for the utilization of all resources in the development of the industries upon which the country's expanding commerce depends to such an extent.

The South's Inspiration.

In a strong plea for a great industrial college to equip Americans for maintaining their mastery in manufacturing competition, the New York Times dismisses with short shrift the idea of action by the national Congress, and says:

The persons to look to are men who have sympathy with the toilers, and at the same time have an outlook on the world of commerce wide enough to perceive that we must fight for our place at the head of the industries by making our exports shapely as well as strong and light. No longer can we trust to the cheapness of machine-made goods, for Europe quickly copies our labor-saving engines; we are already grappling with the problem how to encounter goods as cheap and decidedly more attractive to the eye. Take as an example the latest forward step, or fad, in transportation, the automobile. Our builders must equal the French not only in lightness, stanchness and economy of fuel and material, but in beauty of outline. Until recently our automobiles have been truly monsters of ugliness. At a small initial expense they might have shown graceful curves and fine proportions. These and similar products of our able workmen would be very different to look upon if the latter had not been so strangely neglected by those who have money to place in useful foundations. It is as if many of our millionaires who are altruists had been so impressed when young with the social disadvantages of the lack of a college education that instinctively they have given to the public long lists of schools and libraries and colleges. Where is the millionaire to recognize that we need no more doctors and lawyers and clergymen, but woefully and terribly do cry and clamor for good artist-artisans?

The South ought to be able to answer "here" to that question. It has comparatively few millionaires within its borders, but their number is steadily increasing, while the Southerners who have made their millions in other parts of the country are close to wealthy Northerners and Westerners who have a practical interest in seeing that the material wealth of the South shall be developed to the best advantage. The sagacity demonstrated by their success in accumulating fortunes should readily suggest to them the wisdom, from a strictly business standpoint, of providing against the possibility of American ingenuity being overcome by its own weapons. They should have no difficulty in understanding that no better field than the South could be had for an investment in an industrial institution offering the best training in the world, concentrating public sentiment upon the determination to keep America in the industrial lead and inspiring institutions already struggling under many disadvantages to higher, more hopeful and more helpful efforts.

THE BUSINESS OF POLITICS.

Resolved, That the South favors the politics that will encourage and protect investments within its borders, will raise more chimney-stacks of mills and furnaces, will strengthen and extend railroad systems, will open more mines, will widen the markets for agricultural and manufactured products, and will increase the means and opportunities for placing those products in the markets.

That is a plank of the platform for the South suggested one month ago by the Manufacturers' Record. It is strictly in line with the purpose of the Manufacturers' Record, announced at the beginning of its independent existence, nearly eighteen years ago, to give especial attention "to whatever pertains to the material development" of the South. From that purpose there has been no swerving. Yet at this late day, with the indisputable exhibit of facts accomplished by the Manufacturers' Record for the South's material advance, not infrequently in the face of political and financial difficulties, not a few of its friends and co-laborers seem to find it necessary to criticize its judgment and to question its motives. Typical of these friends is the Jacksonville Times-Union. A few words regarding the position that paper has assumed may, therefore, suffice for all, and may induce them to turn from the error of their ways before it is too late. The Times-Union hears "in horror" "from our best friends such counsel to the South as that embodied in the 'platform' proposed to us by the Manufacturers' Record," and says:

As a maxim to govern our thoughts in every department of industry the counsel is excellent; addressed to the business man it carries assurance of a better day, but in the realm of politics it is a deadly poison, and strikes at the root of our national existence.

That sentence reveals a state of mind which makes unnecessary further quotation from the Times-Union on the subject. It is a mental condition which the Manufacturers' Record has labored in season and out of season to change, and not without gratifying results. That it still persists is not to be denied. The knowledge of it only inspires the Manufacturers' Record to stronger endeavor to destroy it, for the good not only of the South, but of the whole land.

Consideration of it brings to the front the great question of the relations of business and politics, the effects of politics upon business, the business of politics and the politics of business. The politics of business is to further such principles at the polls, in legislation and in every line of human action as will insure steady growth in industrial enterprises, and in the exertion of the energies of railroad and steamship lines in opening up new fields for lumbering, mining, manufacturing, trade and commerce, thus increasing the opportunities for a large majority of men for employment and enlarging the markets for the products of agriculture, and will maintain the stability of national and international finances, without which material progress is impossible. It is the business of every man and every paper recognizing the truth of that to leave no stone unturned in the task of promoting such politics. It ought to be the business of politics to work in harmony with influences for the strengthening of measures conducive to the health of national existence. Too often, however, politics has exactly the contrary tendency. The reasons require no far-seeking. One of the most potent of them is the fact that minds usually well balanced fail at times to perceive the demoralizing and dangerous contradiction in a statement that counsel, excellent when applied to every department of industry and carrying the assurance of a better day to the business man, is a deadly poison when carried into the realm of politics, that is, presumably, party action. It is demoralizing because it is a practical denial that politics and the better day of industry and business can be akin and dangerous, because it fosters the dwarfing, cankering separation of business and politics. The application of legitimate business motives and constructive purposes to political conduct would strike at the root, not of national existence, but of the destructive forces which make of politics an illegitimate business, sapping material strength and paralyzing progressive instincts. Upon the separation thrive the men who have led politics along a path of degeneration from an advocacy of broad theories to a wrangle over individuals who are to enjoy emoluments of public office, or who are to control the enjoyment thereof. These care nothing about financiers, manufacturers and masters of transportation except in so far as they may be the prey of corrupt legislation or the objects of attack from demagogues, who essay, by base appeals to ignorant prejudice and vindictive passion, to prevent a union in sanity of the masses and the classes for the overthrow of the party politician. Reckless in everything except in matters touching their own petty, selfish interests, they assail national credit, corporate integrity and individual thrift with unsparing weapons of revolution and chaos, and prevent a cure of ills in public affairs by menacing real conservatism with direr evils.

But the Manufacturers' Record has not so learned politics. It recalls the days when the measure of a man's patriotism was the work he did for his country, and party was an incident; when men could differ honestly as to questions of national policy without proscription; when honest expression of opinion was held to be honorable and truckling was a disgrace. It believes that after much tribulation the South is returning to conditions which will permit a party name to mean something more than a memory or than a rally-

ing cry for self-seekers who would employ the misfortunes of their fellows to bulwark their crumbling fortunes. Its visions of the South's future, apparently wild twenty years ago, have become fixed realities full of the promise of even greater things. It has done all within its power to hasten realizations of materialities by insisting upon the existence of immense natural resources and the unparalleled advantages for their development. It has spurred the people of the South to fight the good fight of faith in their section, and has directed the attention of outside capital to the need for it, and the rich returns to be yielded for its investment there. For it knew that in the progress of the South is the prosperity of the nation.

When under the lead of its politicians and against the protests of many of the substantial men who were identified with all that is best in the history of the South, the political South aligned itself with doctrines which had been cultivated to the ruin of the South a generation before, the Manufacturers' Record recognized the awful danger threatening the South, and determined to do its best to avert it. Its business then was to preach the politics, regardless of the name by which it was called, which, in its judgment, would prevent another catastrophe for the South, and to oppose the politics which seemed to point straight down the broad road which leadeth to destruction. The terrible contagion was suppressed for the time, but its germs remained. For four years it has been locally erupting in wild legislation directed against corporate wealth, against normal operations of railroad lines, and against the pursuit of lawful and just business, but, happily, with diminishing force. Whenever the occasion has demanded the Manufacturers' Record has combatted the recurrence of the malady as best it could. It will continue to do so, in devotion to what it is convinced are the best interests of the South, and in adherence to the principle that the counsel best suited for men engaged in industry and pointing to the dawn of a better day for business is the counsel that should be followed at the polls.

Ghosts of Grievances.

The recent farmers' congress of Texas, to which the Manufacturers' Record has before alluded, seems destined to have a far-reaching effect for the good of the State. Aside from the discussions at the congress bearing particularly upon special agricultural matters, there were several speeches made setting forth clearly the intimate relations of farmers to other interests of the State and giving sound advice, which, if followed, will send the State ahead to the betterment of all its citizens. More than one paper dealt with the railroad problem, a question vitally affecting farmers, and one which is a favorite theme with those individuals who hope to thrive upon misrepresentation of conditions and tendencies connected with all vast undertakings, such as the railroads, requiring the use of aggregated capital. Quite a reasonable argument was advanced by Mr. John Howard of the Immigration department of the Southern Pacific Company. He said:

It is often said by those who see but one side of the question, "What would the railroads do without the people?" Then the question, "What would the people do without the railroads?" comes before us. We find that one cannot get along without the other very well. Our interests are mutual and inseparable. A house divided against itself cannot prosper. If we work in harmony and pull together we will not accomplish any too much in this day and age of sharp competition.

Texas farmers, Texas business men, Texas railroads and Texas all come in competition with other States, and if we are to make Texas what the State should be it is true we all get together and work for one common cause, and not leave too much for our children to do.

We will say, for illustration, that the people of Texas in general, and the farmers in particular, have a grievance against the railroads of Texas, and we will also say that the railroads have a grievance against the people of Texas. It has been said that we could gather up a double-header trainload of grievances on both sides in Texas. Say we did so. Could we take this trainload of "old hatchets," old scores and old troubles to Illinois, Tennessee or any other old State or country and secure for Texas one good citizen with it, or could we take it to Wall street, New York, or any other street in the United States or Europe and get a dollar on it? If not, then there is nothing to be gained by living in the past. Live, progressive people do not live in the past. Life is too short for this, and there is nothing to be gained by it, but let us not expect the other fellow to do all the burying of the past. We will all have to do our share of this. Then, again, if we agree to bury the hatchet it would be well not to go home and

dig up an ax, as is sometimes done. If we are not ready to bury the hatchet, begin anew and work for the upbuilding of Texas, as people and railroads of other States are doing, would it not be well to decide to have a good fight and settle our differences like men, and not continue looking cross and growling at each other? It is neither business nor manly to continue to live in the past.

The speaker might have added that Texas is not the only Southern State where grievances are still nursed, and that calm reflection would show that the grievances are, after all, ghosts. Now, nursing ghosts is one of the most unprofitable undertakings in the world. Ghosts are exceedingly exacting in their demands upon one's time and patience, and nursing them is likely to drain the nervous system to the point of collapse. One of these ghosts is embodied in the belief that capital ought to invest whether or not good returns for it are in sight. Why should it? No farmer, for instance, plows his land, plants his seed and cultivates his crops, or, in other words, invests his capital of brains, brawn and time, for pleasure only, or for the purpose of seeing things grow or of encouraging his shiftless, timid neighbors to help themselves to the products of his labor. Why should he expect his fellow-capitalist to spend his brain and money in ways of no profit to him? Again, the wise farmer does not plant out of season, in worthless soil or without taking reasonable precautions against visitations of flood and tornado. He does not try to raise sheep in a pasture filled with half-starved curs. So, the capital farmer feels obliged to study the local conditions of places where he would plant money, to know something of the political atmosphere and to guard his crops against wild creatures whose crops thrive best amid the wandering winds. He has an advantage, perhaps, over the tiller of the soil, in that he often is not limited as to the place or time of his planting, but it is equally true that his enterprises, whether he wills it or not, cannot fail to benefit the community where they are carried on. Even were he disposed to antagonize the farmers or his other customers from the same motives as those which, under the guise of politicians, some farmers permit themselves to act, his business sense would prevent him, for he would know that he would be attempting material suicide. The railroad man knows that it is to his inter-

est to cultivate the friendship of as many of his customers as possible. Where there is antagonism, the fault may generally be sought elsewhere. Farmers and railroads, instead of allowing ghosts of grievances to be galvanized for their separation by experts in political wire-working, should find a common ground for action that will send to obscurity the whole pack of parasites who live upon the artificial, imaginary ills of their fellows.

The Outlook in China.

China is "a house divided against itself." And we know, on the highest authority, that such a house must fall. Evidences multiply that there is a dual government at Peking, and that the only dominant force governing both of the combinations is fear of the storm they have raised throughout all the world. The lying and contradictory dispatches, edicts and orders all prove this. It means an early collapse of organized force strong enough to meet the power so soon to be directed against China from all sides. There can be little doubt that the allied forces at Tientsin and elsewhere see this, and that they regard it as offering success to a quick, sharp move by a comparatively small force. There is little belief in the recent dispatches. But it is belief in Chinese demoralization that led to an agreement to push forward with what forces are at hand. The promise of success is not so much in the strength of the allies as in the evident demoralization and confusion of the Chinese, and it is a promise likely to be fulfilled.

With the capture of Peking the Chinese power would go to pieces like a rope of sand. Beyond that the danger will be not from any recuperative powers of China, for her numberless millions cannot be reorganized if Peking falls, but from possible differences between the powers. There are two of the nations that may make trouble—Russia and Japan. But if the trouble comes from Russia, then Japan would be on the ground quickly with a superior force of first-class fighting troops. If from Japan, then the nations having great navies can quickly control the island empire. In a word, conservative powers are in overwhelming force, so that neither of the nations most likely to make trouble can prevail against them. The danger to the world is really from China. If China falls, then the forces beyond that will be overwhelmingly for peace and order.

What has threatened, therefore, to cover the world with war is likely to be quickly changed.

The great commercial and industrial forces of the world move with astonishing rapidity and resistless force in these latter days. We may see, therefore, within a few months, not the nations of the world rushing troops to China for war, but a race for commercial and industrial occupation on a scale wholly unparalleled in the history of the world.

Be it remembered that China is not, like Siberia, a wild, open, unpopulated region, but a country with 400,000,000 people pursuing the arts of peace, with the best of roads and bridges built everywhere, but yet a country where all transportation is carried on, not by railroads or wagons, or even pack animals, but on the backs and shoulders and heads of men and women; where industrial power is hand and foot power, where machinery is of the most primitive construction, made up of

bamboo and strings. Railroad iron, iron and steel machinery, steam and electric-power will all have a brand new field to work on. One thing is certain, namely, that Chinese exclusiveness has come to the day of its destruction, brought there by the events of the last month. Before the snow flies the whole world may be in a rush of peaceful work and too busy to think about war.

In this connection the fact that half of the increased production in iron and steel made in 1899 by the six great iron-making countries of the world—the United States, Great Britain, Germany, France, Russia and Belgium—was made by the United States, and that as the world's demands increase the dependence on America will steadily grow in proportion; that our percentage of world supply in cotton will even more rapidly increase; that the world must look largely to us for coal and for timber, are all of vital and engrossing interest to the people of the South.

Is There Anything in the Silver Issue?

The people who are trying to prove that the election of Mr. Bryan would not endanger our currency system, insisting that free silver is not the paramount issue, may well study very thoughtfully the following from the Baltimore News, in which the certainty of ceaseless agitation for free silver following the election of Bryan is pointed out. Shall this menace to our country be finally destroyed now, or shall we have to endure another four years' fight and the consequent ruination of business are questions to be considered. Under the heading "Is There Anything in the Silver Issue" the News says:

A great deal of fine disputation is being expended—and properly expended—upon the question of the exact way in which the election of Bryan might affect the currency of the United States. Most of this discussion turns on the degree in which, under the recently-enacted gold-standard law, a silverite Secretary of the Treasury might, without downright violation of the law, undermine the security of that standard and shake public confidence in its maintenance. There is another branch of the discussion which turns upon the composition of the Senate—most people, in easy-going American fashions, taking it for granted that that body is sure to maintain a gold-standard majority, while some point out that this is by no means such a certainty as is generally assumed. Upon this latter subject a particularly careful and able discussion appears in a letter in the New York Evening Post of Saturday by Mr. John C. Rose of this city. Mr. Rose presents, candidly and in detail, the situation in each of the States which are to elect senators for the term beginning March 4, 1901, and his conclusion, which it would seem very difficult to impugn, is that in the event of Bryan's election a sound-money majority in the Senate is very far from certain, even in the first half of the coming presidential term.

But there is a broader view of the relation between Bryan's election and the currency issue—one which, while not dependent on any nice distinctions or close calculations, is quite as important and quite as much to the purpose. Let it be granted that the Senate is sure to retain a sound-money majority throughout Mr. Bryan's term. Let it be granted that under the present currency law there is so little opportunity for the Secretary of the Treasury to play silverite tricks that even if he used such powers as he has to the utmost in that direction he could do no appreciable harm. Let it be granted that Mr. Bryan's Secretary of the Treasury would be shrewd enough to abstain, as a matter of policy, from using even such opportunity as he did have for promoting the silver idea, on the ground that the cause would receive far more hurt from the alarm of capitalists than it could possibly be helped by the homeopathic silver dose which it would be in his power to administer. If all these things be granted—that is, if it be granted that no governmental

act, legislative or executive, hostile to the gold standard would be done during Bryan's administration—it still remains true that Bryan's election would be a most serious blow to our monetary security.

For nobody can deny that the moment Bryan was elected, all talk of the silver question being dead—dead as Julius Caesar is the favorite phrase—would immediately vanish. Either a period of distrust and panic would set in at once, or, if not, and if that did not take place during his administration, then the question of silver would inevitably be the crucial one at the next presidential election, and this would be generally acknowledged throughout the entire period. The supporters of the notion that, under existing circumstances, the election of a fanatical silverite to the presidency would be a matter of little consequence from the monetary standpoint fail to observe that they impale themselves on one horn or the other of a curious dilemma. Either Bryan's presidency would bring on financial disaster or it would not; if it would, their case is lost; if it would not, Bryan would be sure to go before the country on the silver issue in 1904, and all the fat would be in the fire again, which we supposed we had got rid of for good when the gold-standard bill was passed.

We are saying nothing now as to the relative importance of the silver issue and the other issues of the campaign. What we do say is that the absolute importance of the silver issue involved in the election of Mr. Bryan is very great. The attempts to show that it amounts to nothing are built on arguments too nice to lean upon in a matter of such importance, even if they be sound; but, apart from all this, and granting everything that can be claimed as to the safeness of the Senate and the impotence of a silverite Secretary, there remains the plain and broad consideration that the election of Bryan would reopen the silver question and place it in a position more formidable and more menacing than it has ever before occupied. A gold-standard man may look this fact squarely in the face, and still vote for Bryan for other reasons; but he cannot ignore or deny the fact if he deals honestly with himself and intelligently with the subject.

High Point an Industrial Example.

In the strong, practical address before the recent meeting of the North Carolina bankers President George T. Winston of the North Carolina College of Agriculture and Mechanic Arts, in illustration of the industrial opportunities in the State, said:

A century ago we used our forests mainly for firewood. Later we sold them as raw material to be cut down and shipped away, either as timber or as lumber, for manufacture elsewhere into finished products. At last we have begun to manufacture ourselves, but we have only begun, and the field is boundless. Recently in High Point a single customer from Chicago was anxious to place an order for \$400,000 worth of furniture. Factories there are converting \$4 worth of white oak into \$70 worth of furniture. Skill and machinery are doing the work. With better skill and better machinery, with other manufacturing establishments in all lines of woodworking as numerous as cotton mills now are, we shall realize that one of our greatest sources of wealth is our forests. They are a source, too, that is self-renewing, for with proper care and management they will last forever. Soil, moisture and temperature are so perfectly adjusted in our State that barren fields will grow up again into forests within a single lifetime.

The wonderful growth in a few years of the furniture-manufacturing industry at High Point thus summarized by Dr. Winston is typical of the industrial development under way in the whole South, and a rich promise of its future. High Point demonstrates what can be done in the South. The town is a pioneer in the movement which is rapidly changing the South from a supplier of raw material for manufactures to a handler of that material within its own limits. One of the most expensive kinds of living is to send away to others material to be made into articles which are afterward bought back in complete form at a great advance in price. The advantages of manufacturing at home where

ever possible, demonstrated by the experience of High Point, are, in addition to the economy in handling material close to the source of production and close to the markets, the logical increase in thrifty, creative population at the center of manufacture, and better opportunities for farmers of the neighborhood to sell in greater variety. The consequence is a general advance of the community, both urban and suburban, greater activity in business channels and almost a geometrical progression in prosperity.

Healthy Fall River.

Anxious students of cotton-mill conditions in this country who in shortsightedness are often unable to see anything in the advance of Southern textile energy than a menace to the stability of similar energies in other parts of the country, ought to seek a quiet, cool place and ponder upon the analysis of the situation at Fall River made by the New York Commercial. It finds that during the past year mill debts at Fall River have been reduced by more than \$1,000,000, and that the mill surplus has been increased by more than \$500,000, the total debt on fifteen corporations being now less than \$2,000,000 and the total surplus held by seventeen corporations being nearly as much, and adds:

This all points to good health in Fall River industries, in spite of the great growth of cotton manufacture in the South. There is likely to be room for many years to come for cotton manufacturing at Fall River. However cheaply our Southern mills are able to turn out their goods, and however excellent the quality they attain, it will be a long time before they have captured all of England's cotton trade and are ready to try their steel, or rather their webs, with Fall River.

These conclusions are by no means surprising to men who hold broad facts to be of more significance than superficial manifestations. They are as gratifying to Southern millmen as to Northern millmen. But, brethren, try to reform. Seek some more profitable occupation, when the outlook is slightly hazy temporarily, than attributing all the ills of New England's textile-manufacturing industry to the success of Southern mills, and quit your demagogic campaigns, open or covert, against the welfare of Southern manufacturers.

For Flexible Banking.

In his speech before the Southern Industrial League, of which he is now president, Mr. D. A. Tompkins of Charlotte, N. C., made a strong plea for greater flexibility in banking operations. He said:

No more serious mistake could be made than to attempt to make money out of paper. No more serious mistake could be made than to precipitate on this country all sorts of currency such as we had under State banking systems before the war. But the need now is not so much one of gold or silver as it is of the right of banks to issue at home a limited amount of notes, redeemable at home and in commercial centers in the coin standard of values, which under present law means gold.

The speech was an elaboration of this plan for the prevention of sharp inflations of the currency and quick contractions, and it condenses the sentiment which is held to quite an extent among business men of the South. Mr. Tompkins is one of these. He is also actively engaged in manufacturing, and may be regarded as typical of the progressive element of Southerners able to look beyond personal interests and immediate profit for individuals to the policies which,

adopted and maintained, will mean the South's bountiful share in national prosperity.

Latin-American Trade.

The New Orleans States is constrained to say that the most remarkable thing about the announcement of a large shipment by a New Orleans firm of goods to Central America is the fact that it is regarded as remarkable. There should, in fact, be no good reason why all the Gulf ports should not be shipping goods in greater quantities than at present to Central and South America. Southern industry is turning out large bulks of articles which are needed in the Latin Americas, and is capable of turning out much more. The way, too, of American trade to the south of us lies through the Gulf ports. Markets so promising and extensive should not be left to other manufacturing nations to monopolize. Perhaps united action by business men of the ports and Southern manufacturers may prevent such a monopoly.

"Quit Populism."

A dispatch from Waco, Texas, says that there was a new note of industrial progress sounded at the populist convention there, and that one of the speakers dwelt upon the necessity of establishing factories and converting raw staples into finished products instead of sending them to a distance and buying them back at an increased price, including freight charges two ways. That fact indicates a decided advance. But it does not go far enough. Factories cannot flourish upon populism. The speech that ought to be made and acted upon is brief but to the point. It is, "quit populism."

The democratic manufacturers and merchants who have been following the lead of these emissaries of Hanna (some of whom are prominent business men) are opening their eyes to the facts in the case. The Manufacturers' Record, if it continues to lend itself to such partisan purposes, cannot expect to retain the support of the business men of the South, 90 per cent. of whom are democrats.

It may be necessary in the near future to do some pretty plain talking about the "non-partisan" propaganda of republicanism in the South.—Charlotte (N. C.) News.

The subscribers to the Manufacturers' Record pay for it because it is of value and interest to them; its advertisers use it because it pays them to do so. For eighteen years it has stood for what it believed to be right, and its readers and advertisers seem to be pretty well satisfied with it, even if its free-silver contemporaries are not. Possess your soul in patience; the Manufacturers' Record is pretty well satisfied with its work and with the satisfaction evinced by its subscribers and advertisers.

The Ginner and Miller, passing all the discussion for and against the round bale, still maintains that it is the man with the cotton, and not this man or that man with a side interest to protect, that demands the attention of the ginner. If a ginner operating a round-bale press pays more than the square-bale ginner he will get the cotton. It is a survival of the fittest, and that is all there is to it.—Ginner and Miller, Dallas, Texas.

This exactly voices the position of the Manufacturers' Record. The cotton-grower is the one whose interests are of prime importance, and in comparison with that side of the question, the success or failure of the square-bale system or the round bale is immaterial.

Several of our State contemporaries say that the Manufacturers' Record recently

sent them an article by Sam Jones in advocacy of trusts with the request that they publish it and send the Manufacturers' Record marked copies, intimating that they might secure some valuable advertising thereby.—Columbia State.

The editor of the State would doubtless have a little more influence in his community if he acquainted himself with facts before he undertook to criticize others.

The Vienna (Ga.) Progress, referring to the "roundlap" bale, very cleverly says:

It has been demonstrated that the round bale of cotton will not burn nor sink. Then the only way to get rid of it is to spin it.

This is exactly what the cotton-mill people of this country and Europe are preparing to do. They propose to spin it just as rapidly as it can be furnished to them.

COAL AND IRON CONCENTRATION.

The Chesapeake Ports and Their Future in Handling Coal and Iron.

By an Engineer.

Events in the iron and coal trade of late days have been of a character to bring out the weak spot in the big concerns on the Great Lakes, both around Chicago and Cleveland, that weak spot being excessive capitalization.

The Manufacturers' Record has heretofore called attention to the sixteen to one basis of capitalization of Federal Steel, which, take it all round, is the best of the newly-organized group based on coke from the Alleghenies and ore from the head of Lake Superior.

In the South there is, compared with the big Northern iron concerns, no over-capitalization, and Tennessee Coal & Iron, which used to look top-heavy, has become, by virtue of the great increase in the value of its coal and ore lands, of which it has approximately half a million acres, and because of the productive development of the Birmingham district, both in iron and basic steel, a very conservatively capitalized concern and quite capable of going through any amount of trade reactions without unduly pinching the profit in iron-making. Tennessee and Alabama iron concerns are well able to take care of themselves.

We wish to speak now of a new field of iron industry that is bound to grow up and to attain enormous proportions and make big profits as the increased world's consumption of iron calls more and more upon American resources.

If one will look at the map it will be very plain that the big bituminous coal districts of Pennsylvania and West Virginia are naturally tributary to the ports of the Chesapeake. The nearest export outlet and the point where Connellsville coke can best meet ores from the West Indies or from Nova Scotia is Baltimore and its surrounding plants. And the Norfolk & Western and Chesapeake & Ohio are naturally tributary to Norfolk, Newport News, Gloucester Point and other lower Chesapeake harbors which will be equally meeting points for imported ores.

That from this on there will be a steadily-growing European demand for American coal and coke is as certain as any future event can be. But the growth in domestic consumption of coal and coke along the coast and concentrating on Chesapeake ports will be even greater.

It is in the hands of the iron men around the Chesapeake and others who will follow them there to control the enormous export trade in steel rails that will grow out of Siberian, Chinese, African and South American railway construction, because, for export, they can put

their product on board vessels at a lower cost than can be done by the great works at Pittsburg, Cleveland, Chicago or in the interior of Pennsylvania. That proposition is so self-evident that it needs no argument. It only awaits the development of the ore fields of the West Indies and Nova Scotia. The recently-discovered enormous deposits of basic ores in Antigonish county, Nova Scotia, lay a foundation for unlimited interchange of coke and ore between Northumberland straits and Chesapeake bay.

Again, while Newport News has a great pioneer shipbuilding plant and Baltimore smaller ones, there is room for expansion, and from year to year all of these concerns will find increasing work to do, and there will be other plants on the west side of the Chesapeake, both in Maryland and Virginia. These will call for big plate mills and for facilities for making all the forms of iron and steel, including machinery, that go into shipbuilding on the grandest scale. And angles, beams and whatever goes into the construction of great buildings; pipe and all that goes into municipal underground work, for which the great cities of the coast will furnish so large a market, can be made at coast plants at as low a cost as anywhere in the world.

As to the fuel side of it, Pennsylvania and West Virginia, the great coal-yards full of steam coal to supply our coastwise and foreign commerce and for export, can lay down at the Chesapeake ports an unlimited quantity of the finest steam-raising coal and the best smelting coke in the world, and at a cost below that at which these great staples can be elsewhere assembled. That is an indisputable fact, and one that can't be got over, and which will not be much longer overlooked. The reaction now going on in the iron and steel trade is already calling very marked attention to it.

The development of the coal interests of West Virginia has proceeded steadily until the State is just coming into second place, and will soon not only be ahead of, but will distance Illinois, now next to Pennsylvania.

There are some features concerning the West Virginia coal field that have not received the attention due them. One is the enormously large area covered not by one or by two, but by three great workable seams, all lying high above drainage and capable of being worked on an enormous scale at minimum cost. And this will be a tremendous factor in developing exports of coal and coke and in building up the iron trade on the Chesapeake.

Another is the super-excellence of the coal for steam and for coke-making, the quality of the coke being equal to any known for producing heat and for sustaining a heavy burden in the furnaces, the steam-raising power of the coal being equal to any in the world.

But the most notable fact about the West Virginia coal area is that it is cut to its base, through and through, by the waters of New river, which rises in the mountains east of the great central valley, flows across it and then cuts through the Alleghenies to the Great Kanawha, and thence on to the Ohio river. This is the only cut through in a length of a thousand miles—from where the Tennessee river cuts around and through the southern end of the coal field up to where the St. Lawrence cuts its way to the Atlantic as an outlet to the Great Lakes.

The New and Kanawha river cut opens out clear across the great 16,000-square-mile coal area of West Virginia all the great seams of coal, and flowing into these streams from either side are many large tributaries which, in their turn, cut, expose and open up on all sides to self-

draining mining by entries run in on the seam the whole area, so that the wealth of the region can be attacked in hundreds of places free of dead work, and the work can be carried on at minimum cost and free of the many dangers and costs inseparable from deep underground mining by shafts and drifts. The pump is eliminated. The danger from water is done away with. There is no fire-damp to explode, little or no timbering, and a double or treble output of coal for a given amount of work.

All these are facts which in the long run are bound to give West Virginia the lead, even over Pennsylvania, and over any and every coal field of the world as a center of coal-mining and coke-making. They are facts, too, which underlie the wealth and value of the Norfolk & Western and Chesapeake & Ohio railroads; which assure the ultimate utilization at great profit of the iron, zinc, copper and other ores of Virginia, West Virginia, Northwestern North Carolina and the Bristol region of East Tennessee.

The flow of this iron and metal trade will be as naturally to Baltimore and other Chesapeake ports as will the movement of coal and coke.

CHICAGO THE SUPPLIER.

The South as a Buyer in Its Industrial Markets.

[Special Cor. Manufacturers' Record.]
Chicago, Ill., July 30.

Besides being a popular producer of all kinds of machinery and accessories, as recently noted in the Manufacturers' Record, Chicago is also unexcelled in the manufacture of telephones and supplies. The independent telephone industry has had a rapid growth in the West, and Chicago has become headquarters for the United States for everything required in telephone construction. The use of the telephone has been extended to the farm, and it is estimated that more than 5000 Illinois farmers now have telephones in their homes, with the movement increasing in popularity. About the same situation exists in Michigan, Indiana, Wisconsin, Iowa and other Western States. There are over twenty firms in Chicago engaged in the manufacture of telephones and accessories, their business extending throughout the world.

Marvelous strides have been made by Chicago telephone manufacturers during the last five years—since the expiration of the fundamental patents on telephones—in the perfection of improved systems that have enabled them to compete with the strongest of organized opposition, which had been in exclusive possession of the field for more than seventeen years. The successful position which they now hold was attained through the high standing of the independent systems, and no organized forces can exist that could even check the future growth of the industry as it is now established in this city.

The basis for success as guaranteed by the leading telephone manufacturers in Chicago is laid down in the following statement by a local company:

"In these progressive days purchasers of central-office equipments are justly becoming more and more exacting in their demands. Efficiency, rapidity and durability are qualities that are always demanded, and compactness is as important as the other three essentials.

"The exchange manager must necessarily be a constant student of the latest type to avoid an unpleasant experience with inferior and unscientific apparatus.

"The development of up-to-date ideas has been slow and irregular. Certain lines of equipment have embodied one or

more ideas of merit, which have been used in conjunction with other ideas or forms of construction which were faulty and pregnant with 'trouble.'

"The demand of today is not for apparatus which has one or more brilliant talking points. Such talking points are of value and should be present, but every other part and feature of the equipment must be good beyond criticism."

The independent telephone manufacturers of this city have entrenched themselves by the installation of first-class factory plants, constructed in such a manner that operating expenses and maintenance are reduced to a minimum, which makes it unnecessary to state that they are prepared to produce apparatus of high-grade construction, adapted to withstand years of wear and tear, insuring the most efficient service.

Chicago manufacturers are now putting on the market all modern styles of telephones to meet any requirements of the telephone world. A local manufacturer says that a greatly increased demand is anticipated for the product of all independent telephone manufacturers, and that it is believed companies operating exchanges will find it difficult to obtain good apparatus on orders calling for deliveries during the next three months.

The South has come into this market as a large buyer of telephones, the finest lines now in use in the Southern States having been made in Chicago, including those of Savannah, Ga.; Waco, Texas; Parkersburg and Charleston, W. Va.; Henderson, Ky.; Richmond, Norfolk and Petersburg, Va.; Charleston, S. C., and various other central points. The demand from the South is increasing, and Chicago manufacturers appreciate the fact that the Southern field is a very desirable one to cultivate.

A large line of superior goods most adaptable to the Southern market is made by the Chicago Rawhide Manufacturing Co., which has a very prosperous business extending to all parts of the world. The company proposes to increase its trade in the South, and will without doubt find that a most profitable market for so varied a line of useful goods, which includes rawhide belting, lace leather and rope, rawhide pinions, bell cord, hydraulic rawhide packing, strapping, halters, hame straps, fly nets, picker and harness leather and other rawhide goods of all kinds. A novel use for which the company prepares large quantities of fine calf skin is that for covering artificial limbs, the material being given a fine texture finish in flesh color. A vast amount of this product is consumed in the United States annually. The company has a good business in the rawhide pinions alone, on account of the durable service rendered, entirely free from friction and perfectly noiseless, making it most adaptable to electrical and other rapid-revolving machinery. The belting produced is of the most valuable made in this country, and commands superior prices in foreign markets. The same may be said of its hydraulic rawhide packing, which is warranted in every respect. The company reports its general business in a very satisfactory condition.

The Victor Electric Co., manufacturer of high-grade electrical specialties, 418-420 Dearborn street, reports a satisfactory business in the sale of its dynamos, rotary transmitters, electric air compressors, fan motors and other apparatus. The company has a growing trade in the South, and proposes to establish agencies at different points in the Southern field for the sale of its manufactures, which have become known in the West as standard goods.

The Thomas Belting Co. is practically a new house, having commenced business about the first of the present year, and which will cultivate the Southern trade. Mr. Thomas, president of the company, was for ten years connected with the Chicago Belting Co., and is thoroughly identified with the belting business. The offices and factory are conveniently located at 46-48 South Clinton street, in the central machinery and supply district of Chicago.

Roth Bros. & Co., manufacturers of dynamos and electric motors, 88-92 West Jackson street, have been doing a good business throughout the summer, the demand for both slow and moderate speeds in electrical-power showing a steady increase. The business of the firm has not, however, been what it should be in the South, probably on account of the time required to make the merits and reputation of a particular line of manufacture known to power users, but the Roth dynamos and motors are now running in numerous Southern cities, where they give satisfactory service.

The International Boiler Compound Co., 49 Market street, reports a steady, growing demand for its boiler compound, which has secured a good hold in the South, large users being such consumers as the Crown Cotton Mills and Farrar Lumber Co., Dalton, Ga.; Montague & Co., Chattanooga; W. T. Parham & Sons, Knoxville, Tenn., and State Penitentiary, Frankfort, Ky. The company contracts for removing scale from steam boilers at a stated price per boiler, or for keeping boilers free from scale by the year at a stated price per month.

The H. W. Caldwell & Son Co. is experiencing a very satisfactory business, the volume of contract work coming from the South and elsewhere making up a busy season for the plant. The continuous expansion in cottonseed-oil-mill construction has rendered a steady demand for conveying and elevating machinery and accessories, of which Messrs. Caldwell & Son have been most successful in securing a large share of the orders for equipments. The company's business for the year will show another very satisfactory increase.

The Hall Compound Feeder Co. is manufacturing an automatic boiler feeder which it is putting on the Southern market, the claim for the feeder being that it is to a boiler what a lubricator is to an engine, the further claim being that in doing its work well it saves fuel and insures against trouble and delay caused by formation of scale. The company also manufactures a boiler compound, and to all users will loan the feeder without charge to feed same (which is in liquid form), thus furnishing two conveniences at one expense.

The Webster Manufacturing Co. reports that its business in power-transmission appliances and contract work has kept up to more than usual July proportions. Business for the seven months has been in unusually steady volume, with indications for a prosperous period during balance of the year.

To Combine Coal Interests.

[Special Cor. Manufacturers' Record.]
Somerset, Ky., July 28.

Several prominent capitalists from Cincinnati, Knoxville and Chattanooga are trying to effect the consolidation of several coal mines on the Cincinnati Southern Railway for the purpose of increasing the output and concentrate the working force. It is proposed to organize one large corporation and consolidate the smaller mining properties under one management. The proposed consolidation is represented by Mr. J. P. Horna-

day, attorney-at-law of Somerset, Ky. The properties to be united are all paying properties, but have not been operated to their capacity in the past for the lack of sufficient capital. The Cogar Creek Coal Co. of this city will go into the consolidation, as will possibly Strunk's Lane, Archie McDonald, Rankin Bros. and others.

The C., N. O. & T. P. Railway Co. is erecting immense coal chutes at Cumberland Falls, twenty miles below this place. The capacity of the coal chutes when completed will be 4000 tons. The demand for coal on the Cincinnati Southern has never been greater than it is now, and there are predictions that there will be a great scarcity of coal the coming fall and winter.

KENTUCKY FLUOR-SPAR.

Developments in the Territory Around Salem.

Recent developments in Livingston and Crittenden counties, Kentucky, have proven that there exist vast deposits of fluor-spar, zinc and lead. The veins are "true fissures," the ores rich and the veins from four to fifty feet thick from wall to wall, the entire matter being "pay ore" in almost every instance. The zinc assays from 60 to 65 per cent. metallic zinc; the fluor-spar 99.86 per cent. calcium fluoride. The lead is found mixed with the zinc, and the veins carry from 15 to 25 per cent. of lead. Thirty years ago the "Columbia mine" was operated for lead. It was sunk to a depth of 130 feet and a number of levels run; the ore changed to a zinc ore, and the operators not being able at that time to save or separate the zinc from the fluor-spar, the mine was closed down, and so remained until this year, when Louisville (Ky.) parties purchased it. The mine has been retimbered and put in first-class shape. The ore on close examination showed down to the 80-foot level to carry fluor-spar, zinc and lead. The vein here is five feet wide, and at 130 feet is eleven feet, and almost solid zinc and lead, the fluor-spar having almost entirely disappeared. The "old dumps" at this mine show hundreds of tons of rich zinc ore that was thrown away along with the finely-ground zinc from the "jigs," which only saved the lead.

The great difficulty in this district has been to make a separation of the zinc from the fluor-spar, but this no longer exists. The Eagle Fluor-Spar Co. of Wheeling, W. Va., D. Garth Hearne, president; T. H. B. Haase, general manager, headquarters at Salem, Ky., concluded that a process could be found that would make a perfect separation of these minerals, so as to put all of them in merchantable shape. After nearly one year of work by experts from all over the country a process was developed that does the work to perfection. They remodeled their spar mill at Salem, Ky., and are now able to make a perfect separation, saving all of the spar, zinc and lead. The machines are simply "jigs," except that air is used instead of water. Their mill sets over the shaft of the "Evening Star mine." In this mine mineral was struck at eighteen feet. At fifty feet a cross-cut was run to see how thick the mineral was. Starting at the foot-wall a cross-cut was run twenty-three feet towards the hanging wall, but this wall has never yet been found. At seventy feet the entire mass of matter found in a shaft 9x13 feet is solid zinc and lead, slightly mixed with fluor-spar. Two streaks of pure lead ore run across the shaft, one six inches thick, the other eight inches. The "Ada Collins mine," owned by this company, was opened by a

shaft forty feet long on a solid vein of fluor-spar. Hundreds of tons have been shipped, but at eighty feet zinc and lead made its appearance in such quantities that work was stopped until a process was found that would make the separation. Work is now going on there. This company has now twenty mines that they are pushing work on as fast as men can do it, and in no single instance have they been disappointed, pay ore having been found in every shaft sunk. I simply have taken one or two of the mines for description, as "they tell the tale" of all of the others. "The Morning Star mine" is one-eighth of a mile from the "Evening Star." The shaft is down sixty feet. The shaft was started twenty-five feet away from the vein, so as to "strike" it at 100 feet, and the mass of matter they raise is full of lead "shines" as large as a "man's fist." Their vein is fully forty feet thick.

Farmers give 20-year leases on thin land. The royalties are twenty-five cents per ton on spar, fifty cents on zinc and seventy-five cents on lead. Some get a little more, some less, but these figures are about the average. Late arrivals offer more, but a party with a level head and one who means to develop the land can supply himself at these figures.

The people are generous and straightforward, and are helping in every way they can to develop the district. What we need is a railroad twelve miles long to connect us with the Illinois Central Railroad. The writer of this will guarantee to a syndicate who will build this branch the free right of way and a good cash donation, and the road will pay right from the start.

In conclusion I will say that from a stay of over one year and close observation this district is destined to prove to be the richest fluor-spar, zinc and lead field in the United States, and one that will make handsome returns on capital invested.

T. H. B. HAASE.

SIX MONTHS OF IRON.

Production of Pig-Iron in This Country Since the First of the Year.

The last bulletin of the American Iron and Steel Association publishes interesting statistics of the production of pig-iron in the United States in the first half of 1900. They show that the total output of pig-iron was 7,642,569 gross tons, against 6,289,167 in the first half of 1899, an increase of 311,033 tons. The production from June, 1899, to June, 1900, aggregated 14,974,105 tons. The number of furnaces in blast on June 30, 1900, was 283, against 289 on December 31, 1899. Unsold stocks on June 30, not including pig-iron sold and not removed from the furnace bank, or in the hands of creditors, or manufactured by rolling-mill owners for their own use, or in the hands of consumers, amounted to 338,053 tons, against 63,429 tons on December 31 last. The production by States was as follows:

States.	Production.		
	Gross tons of 2240 lbs. (Includes spiegeleisen.)		
	First half of 1899.	Second half of 1899.	First half of 1900.
Massachusetts.....	1899.	1899.	1900.
Connecticut.....	4,390	5,739	5,179
New York.....	96,869	167,477	193,460
New Jersey.....	57,930	69,668	101,074
Pennsylvania.....	3,047,998	3,510,880	3,493,842
Maryland.....	101,715	132,762	153,667
Virginia.....	163,896	301,595	272,749
North Carolina.....	3,397	14,438	14,171
Georgia.....	517,087	566,818	605,977
Alabama.....	3,643	2,160	7,662
Texas.....	98,138	89,720	90,358
West Virginia.....	54,020	64,999	45,757
Kentucky.....	142,137	204,029	187,694
Ohio.....	1,075,033	1,303,179	1,464,208
Illinois.....	705,622	736,389	712,473
Michigan.....	65,117	69,326	79,282
Wisconsin.....	83,357	119,818	128,547
Minnesota.....			
Missouri.....	67,829	71,041	84,985
Colorado.....			
Total.....	6,289,167	7,331,536	7,642,569

Quiet at Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., July 31.

In the iron market the past week there were trifling sales of No. 2 foundry at \$14 to \$14.50, classed as of a retail character. In last letter the lowest obtainable quotation for No. 2 foundry was \$13, at which only a trifling business was done. The past week it was offered outright at \$12.50 without evoking any desire on the part of buyers to load.

A feeling prevails that we are not yet on rock bottom. A leading official said: "We are not disposed to make prices, for no matter what our prices are, our offerings are turned down. So we have instructed our agents to submit any firm offers they may receive. So far buyers' views are materially under ours, and the new business so trifling that it is hardly worth considering." There is an indisposition to cut prices on the present volume of business, but a good-sized order would be treated with marked consideration.

The export business has suddenly ceased. Some inquiries were on the market, but they led to no new business. There was but little ocean room offering, and that at such rates as to preclude acceptance of offerings.

The reports of earnings for the six months ending June 30 of the Tennessee and Sloss companies are very favorable as compared with last year. The Tennessee Company reports net earnings for six months ending June 30, 1900, \$1,790,900, as against the corresponding period 1899 of \$509,862, an increase of \$1,280,237. The surplus for the six months ending June 30 was \$1,461,439, as against \$230,484 for the same period in 1899. The increase in surplus was \$1,220,955, which is about 6 per cent. on the common stock.

The net earning of the Sloss Company were \$741,182, from which the bond interest of \$101,287 must be deducted, leaving a net income of \$639,895. Then deduct the dividends declared of \$234,500, and they show a surplus of \$405,395, and this surplus is about 5.39 per cent. on the common stock.

Morris Adler and associates have transferred to the Sloss Iron & Steel Co. the properties in the Franklin county fields. The consideration was \$300,000. This not only secures to the Sloss Company one of the richest brown-ore fields in the State, but gives them the further advantage of delivery of ore at furnaces at a cost that defies competition. They will put the Lady Ensley furnace at Sheffield in blast at once.

A company composed of local and Eastern parties has been incorporated under the name of the Eumawhee Mining Co. to develop the specular ore property east of us mentioned last week. A spur-track is being built to connect the mines with the Louisville & Nashville Railroad, and operations will begin at once. To the East Alabama furnaces particularly it will be a boon, as they will have a splendid mixture to go with their brown ores. Paralleling the vein of specular ore is a true lead of brown ore of high quality, and within a stone's throw is a large deposit of marble running 98 per cent. of carbonate of lime.

J. M. K.

Eastern Iron Markets.

[Special Cor. Manufacturers' Record.]

Philadelphia, Pa., August 1.

The pressure to sell iron and steel is just strong enough to emphasize the weakening tendency. It was given out that a great pow-wow at Chicago would result in a reduction of prices of Bessemer and billets. The pow-wow took

place. The Bessemer pig men refuse to lower prices, and the billet manufacturers, after backing down to \$19, thought they had done enough, but the market does not think so and refuses to buy except in a moderate way.

There have been very few dealings in Eastern Pennsylvania in pig-iron or in finished products for a week. Consumption has fallen off some, but not to any serious extent. Quietness prevails, and the market is still looking for further drops. Our customers have very little material on hand as a rule. This is also the case with New England buyers. No. 2 foundry users are looking about for large supplies to see them through to the end of the year. The forge-iron makers are asked to name bottom prices for fall supplies, and they are quoting No. 1 at \$17.50, No. 2 at \$16.50 and forge at \$14.50 to \$15.

The Danville Bessemer Company at a meeting in Camden on Monday determined to sell its plant and go out of business. A Canadian concern is looking at it.

There is trouble over the signing of the scales, but that will not hurt Eastern Pennsylvania mills to any extent, as they always work below the West.

Since last week bar-iron makers have been asked to name prices on large lots of common iron for car work. The railroad companies have need of more cars. The bridge builders have ordered heavily, and are still at it. Prices are about \$10 per ton below spring quotations.

The tinplate makers are holding conferences this week with their employers at New York.

American material will be wanted to build 100 miles of the Algoma Central Railroad, Canada, and a large dock and two steel bridges at the "Soo."

The general tendency to substitute heavy steel rails for light ones is bringing considerable work to our steel mills. The Canadian minister of railways is about to order 20,000 80-pound rails at a Pennsylvania mill.

Our export bituminous coal trade is increasing rapidly. About 60,000 tons are now being loaded, and our exporters have inquiries for large quantities for European destination.

Earnings of Alabama Iron Companies.

The report of the Sloss-Sheffield Steel & Iron Co. shows that the net earnings for the half-year ended May 31 were \$741,182. Out of this there was paid in bond interest \$101,287, and the preferred dividend of \$234,500, leaving a surplus of \$405,395.

The Tennessee Coal, Iron & Railroad Co. has made its report of earnings for the month of June and for the six months ending with June 30. Both show large increases over the corresponding periods of last year. The net earnings for the month of June were \$184,037, against \$116,459 for the month of June, 1899, an increase of \$67,548. The net earnings for the six months ending with June 30 were \$1,790,900, compared with \$509,862 for the corresponding period of 1899, an increase of \$1,280,237. The surplus for the month of June was \$129,260, compared with \$69,896 in June, 1899. The surplus for the six months ending with June 30 was \$1,461,439, compared with \$230,484 for the corresponding period in 1899. The increase in surplus in June was \$59,364, and for the first six months of the year \$1,220,955.

A dispatch from Birmingham, Ala., says that trial shipments of steel billets have been made by the Tennessee Coal, Iron & Railroad Co. to Glasgow and Copenhagen.

PRaises THE ROUNDLAP BALE.

Senator Jones' Interest in the American Cotton Co.

In an interview in the New York Sun Senator James K. Jones of Arkansas, chairman of the Democratic National Committee, discussing his ownership of stock in the American Cotton Co., said: "It may not be out of place to say what the American Cotton Co. is and how I became identified with it."

"More than ten years ago John W. Graves of Arkansas began work on a press designed to roll up cotton at the gin in highly compressed roundlap bales. Seeing in the perfection of his invention an improvement of inestimable value to the South, where cotton for more than a hundred years had been and still is baled in the crudest imaginable way, I advanced money to carry on the work in which he was engaged. By 1895 Graves and W. E. Anderson, who had become associated with him, had built a press which made a round bale of great density, the distinctive merit of which was that it required neither bagging nor ties. We lacked, however, the necessary capital to develop the business, and when in 1896 the American Cotton Co. was organized to furnish the money for making practical the improvement in baling cotton, we sold it our patents, and I thus became a stockholder in that company."

"This company is in no sense a trust, nor is it a company with inflated capital. It is simply a business organization with capital large enough to carry on successfully the enterprise in which it is engaged. It has developed rapidly. The roundlap presses which it makes have been established at 300 locations in the cotton States. These presses put up cotton at the gin plants in highly compressed, self-containing bales, which dispense with bagging and ties, and, not needing to be recompressed, as all square bales intended for distant markets must be, are ready for through shipment to the mills in this country or to ports abroad without the necessity of resampling, and with the minimum of expense. The profit which the company makes is not a charge upon the cotton, but is a part of the roundlap bale savings—some \$3 or \$4 a bale—which are shared by cotton-growers, cotton-ginners, railroad, insurance and steamship companies and other interests engaged in the marketing of the South's staple crop."

"The American Cotton Co. does not aim at a monopoly in the handling of roundlap bales, but ginners are free to sell in the open market at any time and to any buyer. It does, however, guarantee to every ginner who uses its presses that all properly-made roundlap bales shall sell for a substantial premium above the market price of square bales."

"If to have been instrumental in the development of this great invention and to own stock in a company which by its use introduces scientific methods of economy in the marketing of the American cotton crop, not only without cost to the farmer, but actually to his profit, is a just ground of criticism against me, I am greatly mistaken. Other round-bale presses are being made. The American Cotton Co. has never attempted to absorb any of these, but openly competes with them. We do claim the right to use our own patents, a right which is guaranteed to us by the Constitution of the United States."

St. Louis Southwestern Improvements

The St. Louis, Southwestern Railway Co. has begun a number of improvements to its lines in Texas, which include the rebuilding of a considerable portion of the roadbed, also the location of sev-

eral new bridges. A number of new passenger engines have recently been placed upon this division of the road.

AN IMPROVED TOOL STEEL.

Exhibition of the Taylor-White Process at the Bethlehem Steel Works.

At the works of the Bethlehem Steel Co. at South Bethlehem, Pa., a remarkable exhibition was given this week of a quality of tool steel which is now being used in the various departments of these works. The steel is the result of applying what is known as the Taylor-White process, invented by Messrs. F. W. Taylor and Maunsel White, who are associated with the company. At the exhibition, which was witnessed by representatives of the technical press throughout the country, an ordinary tool was tested in cutting very soft steel at a high speed, with the result that in less than ten seconds the metal had become so heated as to soften the edge. One of the Taylor-White tools was then tried, and remained in operation several minutes at the same rate of speed. Although it was heated red hot, an examination after the test showed that the edge had not been affected in the least.

In developing the Taylor-White process at these works over \$100,000 has been expended, and it is believed that the quality of the tools will greatly increase the output of machine shops. It has been found that by using the improved tools the cutting speed has been increased 183 per cent. over tools formerly used, while the depth of the cut has been increased 30 per cent. and the quantity of metal removed hourly 340 per cent.

Representatives of over 100 metal-working concerns throughout the country have visited the Bethlehem plant to investigate the merits of the process, and it is stated that already a large number of shop rights have been sold.

Manual Training in Germany.

There exist at present in Germany, distributed in 605 places, 861 schools and institutes wherein manual training is carried on in 1514 workshops. Of this number, 836 schools and institutes conduct the training on a pedagogical basis. Prussia has 570 manual training schools. The 1514 pupils' workshops comprise 286 independent manual training schools and 238 public schools, of which 16 are auxiliary schools where the work is obligatory, 17 are middle-class schools, 41 are high schools (made up of 8 gymnasiums, 6 technical gymnasiums, 12 technical and technical high schools and 15 boarding schools), 7 are preparatory institutes, 26 are teachers' seminaries and 93 are boys' asylums, while the remainder consists of various kinds of private educational establishments.

Five hundred and thirty-five workshops are devoted to wood carving, 527 to working in cardboard and 356 to the carpenter's bench. Of these, 68 are closely connected with wood carving, 77 with preparatory roughing-out work, 35 with metal work, 28 with country timbering, 11 with wood and metal turning and 11 with modeling in clay.

Over 2200 German teachers have been taught to become instructors in manual training. Of these, 954 were taught in Leipzig and 1250 acquired training in 33 places in other parts of Germany.

The output in the Joplin (Mo.) district during the week ended July 28 was 8,874,470 pounds of zinc ore and 982,760 pounds of lead ore, valued in all at \$134,047.

Crude-oil shipments from the Corsicana (Texas) field are being made to Europe by way of Sabine Pass.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

THIRD-RAIL ELECTRIC SYSTEM.

Notable Improvement to Be Made on the Baltimore & Ohio Belt Line.

As recently announced in the Manufacturers' Record, the Baltimore & Ohio Railroad Co. has determined to use what is known as the third-rail electric system as a substitute for its present overhead conduit on the Belt Line section through Baltimore. Since the completion of the Belt Line electrical locomotives have been utilized for hauling both freight and passenger trains from Camden Station into the northern suburbs. The current is conveyed by what is known as a Z bar, along which a metallic shoe slides. This shoe is connected by a flexible rod with the electric locomotive. In order to support the current bar a series of arches were required to be built at regular intervals, the system being a sort of overhead trolley on a large scale. It is stated that the system is not as satisfactory as was expected, and hence the decision to substitute something else for it.

Mr. W. B. Young, electrical engineer of the Baltimore & Ohio, informs a representative of the Manufacturers' Record that the Murphy system will be used on about one mile of the Belt Line, which is seven miles in length. On the remainder of the distance what is known as the sectional system will be utilized. This is in operation on the Nantasket Beach division of the New York, New Haven & Hartford Railroad, and is considered a decided success. A third rail for conveying electricity will be laid along the entire line, but in portions it will be located at the side of the track. The electrical locomotives at present in service will be used in connection with the new system, the current being taken from the bottom of the locomotive instead of the top, as at present. The contact will be made by means of a sliding shoe, as at present, and the overhead-arch system and wiring will be removed. It is calculated that the work of remodeling will occupy but a short time. It will begin about August 15.

The Murphy third-rail system has been in successful operation at Manhattan Beach on Coney Island for the past year. By its use no overhead apparatus is required whatever, the motor car taking current from a rail laid in the middle of the track. The track itself is built in the usual manner, the size of the current or feed rail varying according to the quantity of power needed. It is constructed in such a manner that the inventor claims no portion of the rail is "live" except that which the car passes over. This is possibly the most valuable feature of the invention. It is accomplished in the following manner:

Each rail is connected to what is termed a solenoidal switch, which has one winding of coarse and another of fine wire. When the car is ready to start the switch is opened, and there is no electrical connection between the car and the feeder. With his controller the motor-man connects the motor dynamo to the third rail and to the ground, and current passes through the fine wire of the switch and causes it to operate. In response to this current the plunger rises and first makes contact between main feeder and the rail, and then breaks the current of the fine-wire winding. The controller is opened and the current comes from the feeder through the coarse-wire winding of the switch to the third rail, and from thence through the car motor to ground,

causing the motor to revolve and the car to move. The switch is held shut because of this current in the coarse-wire winding. In this closed condition the switch will remain as long as the car is taking current from the section to which the switch is connected. When the car leaves the section there is no longer any current passing through the switch feeding it, and it falls open, first breaking the electrical circuit from the sectional rail through the fire wire to earth. The switch is then ready for the next car. The car being thus started, the motor dynamo is no longer needed to operate the switches, because the car is provided with two sets of shoes, which are connected together and placed sufficiently far apart to span the distance from section to section. The forward shoe as it impinges on a section subjects it to the full-line potential, drawing its source of current from the rail preceding. It will then fall open from lack of current to hold it up, and there is then no current to break.

It will be noted that the motor is provided with what might be termed an individual dynamo to start it. After a car gets under headway, however, the current from the third rail is depended upon altogether. The motor dynamo obtains its current from a storage battery.

One advantage claimed for the Murphy system is that there is comparatively small leakage of the electric current, even when the rails are immersed in salt or fresh water. At Manhattan Beach the cars have been operated successfully when the track was covered with salt water. Arrangements are made to cross the tracks of other railroads without interfering with the operation of the motor car.

Southern Railroad Building.

In its semi-annual review of the railroad construction in the United States the Railroad Gazette has some interesting statistics relative to the activity of this kind in the South. It calculates that during the six months ending June 30 last the following mileage was built in the various Southern States compared with the first six months of 1899:

States.	1900.	1899.
Alabama.....	37.25	14.25
Arkansas.....	62	83
Florida.....	55	60.5
Georgia.....	117.07	48.6
Kentucky.....	4	—
Louisiana.....	26.7	62
Maryland.....	7	19
Mississippi.....	119.5	85
North Carolina.....	27	30.14
South Carolina.....	101.86	50.2
Tennessee.....	53	7
Texas.....	164.5	25
Virginia.....	44.4	1.75
West Virginia.....	45.75	10.5

It will be noted that in several States the new mileage is considerably more than last year, although 1899 was noted for the activity in railroad construction throughout the South. For instance, Georgia has constructed 117 miles this year, or over twice as much as during the first half of 1899. Mississippi has nearly 120 miles to its credit, South Carolina 102 miles, while Texas has constructed 164½ miles, compared with twenty-five during the first half of 1899, and seventy-three miles more than during the entire year. Although Virginia built sixty-three and three-quarters miles of line in 1899, already it has constructed nearly fifty miles during the present year. West Virginia has a record for more new mileage this year than during the entire period of 1899.

It will be remembered also that the price of rails and other material has greatly advanced within a few months, which has undoubtedly caused the postponement of the building of several lines. Yet, in spite of these facts, it will appear that during the present year a more extensive mileage will be built in the South than during its predecessor.

Earnings Doubled in a Year.

The annual report of the Mobile, Jackson & Kansas City Railroad for the year ending June 30 presents some unusually interesting figures. As readers of the Manufacturers' Record are aware, this line is about fifty miles in length, and was originally built between Mobile and a point in Eastern Mississippi. The entire earnings of the line amounted to \$114,364, and the net earnings to \$57,000. As the total bond issue is but \$1,000,000, a surplus, after paying interest and expenses, was left of about \$7000, although the company depends for the present entirely upon local traffic. The report contains a comparative statement of the earnings for the year ending June 30, 1899, and June 30 last. This shows that the freight and passenger revenue has more than doubled, the amount received from freight business amounting during the first year to \$42,000, and from passenger business to \$10,000. The entire gross earnings have increased over 100 per cent. During the year the company purchased three additional locomotives and about seventy freight cars, making the principal payment for the rolling stock out of the earnings of the road. At present eleven saw-mills, twenty-two turpentine plants and a number of other industries are located along the road, with several more in prospect.

New Arkansas Line.

The Gurdon & Fort Smith Railroad Co. has been organized to build a line between Gurdon and Shawmut, Ark., a distance of thirty-five miles. The road will extend through a portion of Southwestern Arkansas in Clark county, and will reach timber lands in that portion of the State. At Gurdon it will connect with the St. Louis & Iron Mountain road. It is understood that the promoters intend eventually to build it to Fort Smith. In a letter to the Manufacturers' Record William Grayson, president of the promoting company, writes that bids are now being secured for grading the line, and that the rails and rolling stock will be purchased later on. W. E. Grayson is vice-president, and N. W. McLeod, secretary and treasurer. All the officers are interested in the St. Louis Refrigerator & Wooden Cutter Co. of St. Louis, and have extensive mills at Gurdon, also Arkadelphia, Arkansas.

Southern Railroad Earnings.

Commenting upon the railroad earnings in the South recently the New York Tribune has the following:

"Railroads in the South and Southwest continue to return enormous traffic receipts, with increases generally reported over corresponding periods of other years. The Southern Railway for the third week in July shows an increase in gross earnings of \$61,223, making a gain of \$127,347 for the first three weeks of the month. The Norfolk & Western's gain for three weeks is \$98,275. The Missouri Pacific for the third week showed a gain of \$62,000, and the Central branch one of \$6000. The Missouri, Kansas & Texas increased \$7443, and the only decrease of any size was made by the Texas & Pacific, which lost \$1679. The Louisville & Nashville is doing a big business, its gain for the third week amounting to \$11,285."

Gulf & Ship Island Improvements.

The Gulf & Ship Island Railroad Co. has made a contract with the Baldwin Locomotive Works for six additional engines, which will be used for hauling fast passenger and freight trains. Two of the locomotives have already been received.

The company has also completed shops at Gulfport, Miss., which are among the most complete in the South, with facilities for manufacturing freight as well as passenger cars. It is believed that rolling stock can be made at home more cheaply than it can be bought from other companies. The Gulf & Ship Island Company has also been instrumental in securing extensive harbor improvements at Gulfport, which includes a pier about one mile long which is used largely for the lumber shipments which are brought to Gulfport over the new line.

Illinois Central's Policy.

In a recent issue the Manufacturers' Record referred to the increase in annual dividends of from 5 to 6 per cent. on the stock of the Illinois Central Railroad. In a letter to the directors of the company relative to the policy of the Illinois Central President Fish says:

"Since the general revival in railroad business set in, many companies have changed their policy and are now making liberal charges to operating expenses for both maintenance of way and maintenance of equipment. These will in due time be reflected in the forthcoming reports. Your property has the advantage of having had these outlays made currently during the past ten years, when for a long time both labor and materials were, relatively speaking, cheap. The estimates which are now submitted to you with the statement for the year ended June 30, 1900, indicate that after the payment of the expenses of operation, taxes, interest and funded debt, contributions to sinking funds, rents of leased lines and other fixed charges there will be available approximately \$5,400,000, or 9 per cent. upon the present capital of \$60,000,000. The dividend of 3 per cent. to be paid September 1 will call for \$1,800,000."

Service Extended.

The Philadelphia & Baltimore Steamboat Co. has begun its service to Bridgeport, Conn. It is understood that for the present a vessel will leave Philadelphia and Bridgeport weekly carrying freight only. The City of Philadelphia has been put on the line, and will run by way of Long Island Sound and the inland water passage between Philadelphia and New York.

Railroads in Virginia.

According to the board of public works of the State of Virginia, the total valuation of railroad property is \$56,582,000, an increase of about \$1,000,000 over last year. Upon this property the railroad companies pay taxes to the amount of \$253,000. The total mileage in the State is estimated at 3710, compared with 3691 a year ago.

Railroad Notes.

In a letter to the Manufacturers' Record Mr. E. L. Russell, president of the Mobile & Ohio Railroad Co., denies the report that this company is considering an entrance into Pensacola, Fla.

The Choctaw & Memphis Railroad Co. has purchased the interest of the Little Rock Bridge Co. in the bridge which it controls over the Arkansas river. This bridge is used by the railroad company to enter Little Rock.

A dispatch from Portsmouth, Va., is to the effect that property has recently been sold on the water-front in that city to representatives of the Southern Railway Co. One purchase represents an outlay of \$40,000, and is for real estate on the Elizabeth river.

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

The Rowanmore's Cargo.

The steamship Rowanmore, which recently cleared from Baltimore for Liverpool, carried a cargo comprising 7052 bales of cotton, 1000 barrels of rosin, 1672 tons of flour in sacks, 1000 tons of canned goods, 350 tons of copper, 900 tons of lumber and logs, 240 hogsheds and packages of tobacco, 125 tons of wax, 622 tons of provisions, 1500 sheep and 731 cattle, besides a quantity of grain. It represented ten trains of fifty cars each, and is one of the largest ever sent out of Baltimore. This vessel, which has already been described in the Manufacturers' Record, has a license to carry passengers as well as freight, and has inaugurated a passenger service between Baltimore and Liverpool direct.

Shipbuilding at Norfolk.

In a letter to the Manufacturers' Record J. A. C. Groner of Norfolk, Va., writes that arrangements are now being made with New York parties to underwrite the bonds to be issued by the Norfolk Shipbuilding & Dry-Dock Co. This corporation, which represents local capitalists, intends building an extensive plant on the harbor, which will include a series of cradles of 800, 600 and 2500 tons, respectively, also a power-house, a machine shop, blacksmith shop and saw-mill. The company also has planned a dry-dock and slip large enough to accommodate vessels 300 feet in length. J. P. Andre Mottu, a prominent banker and real-estate holder of Norfolk, is president of the company.

Locomotives for Finland.

In addition to its orders already in hand, the Richmond Locomotive Works has received another order for twelve locomotives to be used on the Finland railways. They will be 10-wheeled engines for passenger trains, with 16x24-inch cylinders. This is the third order which this company has received from the Finland government.

Horn-Goods Finishers.

W. Arnd of Warsaw writes to the Manufacturers' Record that he is anxious to secure at the earliest time catalogues of the American manufacturers of machines for finishing combs, buttons and fancy goods made of horn.

Notes.

The value of exports from Newport News during the fiscal year ended June 30, 1900, was \$34,733,731, an increase over the preceding year of \$6,530,417.

One day last week a steamer carried from Newport News, Va., to Alexandria, Egypt, 6200 tons of coal, and nine more vessels are scheduled to load in the near future at the Virginia port cargoes aggregating more than 30,000 tons.

It is understood that Texas representatives in Congress will endeavor to secure an appropriation to deepen the Brazos river from its mouth to Waco, a distance of about 300 miles. It is claimed that a channel large enough for light-draft steamers can be maintained this distance by dredging.

The first bale of this season's cotton shipped from San Patricio county, Texas, was sold for charity at the Cotton Exchange, New York, at sixteen and one-half cents a pound.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Another 10,000-Spindle Mill.

Another 10,000-spindle cotton mill will be added to the quota already in operation in North Carolina. This latest plant will be built by the Rhodhiss Manufacturing Co., a \$300,000 concern organized by Messrs. J. M. Rhodes and C. J. Rhodes of Cherryville, N. C., and Geo. B. Hiss of Charlotte, N. C. These parties have purchased the Devil shoals and 500 acres of land on the Catawba river, near Lenoir, N. C., where the plant will be located. The water-power will be developed to operate the mill's machinery, and it is said that work on the enterprise will be commenced at once. The mill will both spin and weave, its equipment to be 10,000 spindles and 250 looms. Half the spindles will manufacture yarns for the market, and the other half will supply the 250 looms. Messrs. Hiss, J. M. Rhodes and C. J. Rhodes will be, respectively, president, vice-president and secretary-treasurer.

Lancaster's 50,000-Spindle Mill.

The Manufacturers' Record announced last month the intention of the Lancaster (S. C.) Cotton Mills to increase its cotton-mill investment from \$150,000 to \$1,000,000 by the erection of an additional mill. Since the announcement the company's president, Mr. Leroy Springs, has been closing contracts for pushing the work of constructing the plant. The buildings will require 4,000,000 bricks, and a plant to make them will be located by a Charlotte (N. C.) brick manufacturer, to whom the contract was awarded. The new addition's 50,000 spindles and 1500 looms are to be turned by electrical power, transmitted from a water-power developed on the Catawba river eight miles from Lancaster. A company entirely distinct from the mill corporation is developing the water-electrical power.

The Knoxville (Tenn.) Woolen Mills.

Extensive enlargements and improvements are to be made by the Knoxville Woolen Mills of Knoxville, Tenn. The company announces that it will install 5000 more spindles in its cotton department, thus increasing its spinning spindles to 10,000. This will require the mill to employ 125 more operatives, thus bringing the total number of operatives up to nearly 1000. The company has 16,000 mule spindles and 500 looms besides the machinery mentioned, and its production is all-wool jeans, cassimeres, cotton warps and hosiery yarns. An abundance of orders are on file. About \$75,000 will be expended on the betterments.

Textile Notes.

The Overman & Schrader Cordage Co. of Covington, Ky., and Cincinnati, Ohio, will increase its capital stock from \$100,000 to \$200,000.

The Olympia Cotton Mills (now building a 104,000-spindle plant at Columbia, S. C.) will issue \$250,000 of preferred stock, making an increase of its capital from \$1,500,000 to \$1,750,000.

Messrs. G. W. Green, Jr., and H. K. Anderson of Williston, S. C., have incorporated the Rosemary Knitting Mills of Rosemary, S. C., for the manufacture of knit goods. The capital stock is \$30,000.

Stock has been subscribed for a knitting mill at Winder, Ga., and machinery ordered for the plant. About seventy-five hands will be employed. Site will be selected and building erected at once.

Names of interested parties will be announced later.

The directors of the Parkhill Manufacturing Co. of Fitchburg, Mass., will visit Huntsville, Ala., during the coming week to organize under Alabama laws for the erection of the 10,000-spindle mill recently announced.

The sixty-ninth meeting of the New England Cotton Manufacturers' Association will be held at Washington on October 17 and 18. While the arrangements are not fully completed, yet it is promised to be a meeting of unusual interest.

T. J. Arline of Wrightsville, Ga., contemplates the establishment of a knitting mill for the manufacture of ladies' underwear and hosiery. Manufacturers of the machinery needed in such a mill are requested to send estimates on equipment and other information.

Efforts are being made at Spring Hope, N. C., for the organization of a \$100,000 cotton-mill company to build plant. The town has distinct advantages for the location of such a factory, and outside capital is invited to become interested in the enterprise. P. L. Woodard can furnish information to inquirers.

The John E. Smith Manufacturing Co. of Thomson, Ga., has completed and is now operating its 2500-spindle mill for the manufacture of single yarns, warps and skeins. The capital invested is about \$50,000. John E. Smith is president; John E. Gross, vice-president, and J. T. Neal, secretary-treasurer.

The proposed \$30,000 knitting company at Chattanooga, Tenn., mentioned last week, is being promoted by George Knowles of the Hero Knitting Mills of Downingtown, Pa. Charter has been applied for and establishment of plant will be arranged for at once. A \$5500 brick building will be erected to accommodate the machinery. The latter will employ 150 hands, giving a daily production of 300 dozen garments.

Investors thinking of building a cotton mill in the South are invited to investigate an eligible location that is now available. This location possesses superior transportation facilities, both by water and rail, to all the markets. A bonus of from \$50,000 to \$100,000 and a large site will be offered to a reputable proposition. Particulars can be obtained by addressing "B. B.," care of the Manufacturers' Record.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, July 31.

No. 10-1 and 12s-1 warps.....	14 @14½
No. 14s-1 warps.....	15 @15
No. 16s-1 warps.....	15½ @16
No. 20s-1 warps.....	16½ @16
No. 22s-1 warps.....	17 @17
No. 26s-1 warps.....	18 @18
No. 6s to 10s bunch yarn.....	13½ @14
No. 12s-1.....	14½ @15
No. 14s-1.....	15 @15½
No. 16s-1.....	16 @16
No. 20s-1.....	16½ @16½
No. 22s-1.....	17 @17
No. 26s-1.....	18 @18
No. 8s-2 ply soft yarn.....	14 @14
No. 10s-2 ply soft yarn.....	14½ @15
No. 8s-2 ply hard.....	13½ @14
No. 10s-2 ply hard.....	14 @14
No. 12s-2 ply hard.....	14½ @15
No. 14s-2 ply.....	15 @15
No. 16s-2 ply.....	16 @16
No. 20s-2 ply.....	17 @17
No. 24s-2 ply.....	18 @18
No. 26s-2 ply.....	18½ @19
No. 30s-2 ply yarn.....	19 @19½
No. 40s-2 ply.....	20 @20
No. 8s-3, 4 and 5 ply.....	13 @13½
No. 20s-2 ply chain warps.....	17½ @18
No. 24s-2 ply chain warps.....	18½ @19
No. 28s-2 ply chain warps.....	19 @19½
No. 30s-2 ply chain warps.....	20 @21
No. 16s-3 ply hard twist.....	16 @16
No. 20s-3 ply hard twist.....	17½ @18
No. 26s-3 ply hard twist.....	18½ @19

Market very quiet.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record, Baltimore, Md., August 1.

The local phosphate market has ruled quiet during the past week, with the demand from fertilizer manufacturers moderate. Several large lots of Tennessee rock were offered, but no sales reported. The market for all grades of phosphate rock is steady under the moderate volume of business reported. Tennessee phosphate rock is generally in better demand at mining sections, especially from domestic sources. At Mt. Pleasant business is reported better, and both foreign and domestic shipments are improving. As to prices, they continue very steady, except among small miners, who, in some cases, are offering their output below list figures. The quotations at Mt. Pleasant are generally steady as follows: \$2.25 to \$2.50 for 70 to 72 per cent., \$2.75 for 75 per cent., and \$3.50 to \$4 for 80 to 82 per cent. In Florida there is a good demand, both from foreign and domestic sources, and prices for both pebble and hard rock are firm. Shipments from the ports continue of more than average volume. There is a better foreign demand for South Carolina rock, and prices continue to rule firm, while shipments are better to coastwise ports. Among the charters for the week were the British steamer Guilahall, 1650 tons, from Port Tampa to Certe with phosphate at 25/4, August, and bark Jessie McGregor from Orchilla to Richmond, Va., with phosphate on private terms.

Fertilizer Ingredients.

The tone of the market for ammoniates continues firm, and there is a fair demand for material. Western holders are generally firm in their views, and ask outside figures. Sulphate of ammonia is firm and a shade higher. Nitrate of soda is strong, both for spot and distant positions. Messrs. Thos. H. White & Co. in their July circular say: "During July ammoniates were in demand. The market was held firmly. Buyers bought reluctantly, but on every sale producers' pretensions were advanced. Winter contracts of packers' tankage are in special request, but prices named are considered mostly prohibitory. The fish catch on the coast has been unsatisfactory. The general features of the Eastern and Middle States' trade are good. The wheat crop is large, fruit abundant and in good condition, and a heavy fall trade expected. In the South also the situation, with high prices for cotton likely to prevail, promises well for business next fall and winter. We await with interest the opening prices of cottonseed and meal, as this product is the most important factor in determining values of ammoniates."

The following table represents the prices current at this date:

Sulphate of ammonia (gas)....	\$2 85 @ 2 87½
Nitrate of soda, spot Balto.....	@ 2 05
N. York.....	@ 1 80
Blood.....	2 25 @ 2 27½
Azotine (beef).....	2 20 @ 2 25
Azotine (pork).....	2 20 @ 2 25
Tankage (concentrated).....	1 85 @ 1 97½
Tankage (9 and 20).....	2 15 @ 2 20 & 10
Tankage (7 and 30).....	19 00 @ 19 50
Fish (dry).....	23 00 @ 24 00

Phosphate and Fertilizer Notes.

The British steamship Melbridge cleared from Savannah, Ga., last week with 4000 tons of high-grade Florida phosphate rock for Gothenburg and Gadyiken.

It is stated that the Powers-Gibbs Fertilizer Co. of Wilmington, N. C., now under control of the Virginia-Carolina Chemical Co., has been leased to the Navassa Company for a term of years. The lease is to facilitate the handling of the products of the two companies.

Messrs. Griffith & Boyd of Baltimore have commenced the erection of a new fertilizer factory to replace the plant recently burned. The new building will be three stories high, 200x280 feet, and will cost, with machinery, about \$60,000.

The British steamer Peareth sailed from Port Tampa, Fla., on the 21st ult. for Stettin, Germany, with a cargo of phosphate rock consisting of 2763 tons of rock loaded by Charles E. Abson from the mines of W. N. Camp and 1504 tons of pebble loaded by Louis R. Chazel from the mines of Phosphoria Phosphate Co. The German bark Khorasan finished loading on the 28th ult. with a cargo of 1522 tons of pebble phosphate from the Greenhead Phosphate Co. and sailed for Yokohama, Japan.

Four short stories, the beginning of one serial and the concluding chapters of another give the August Ladies' Home Journal claim to the title of Midsummer Story Number. There are besides upward of thirty other features—"College Girls' Larks and Pranks," "The Haunted Houses of New England," "My Summer with Some Chipmunks," "A Missionary in the Great West," by Rev. Cyrus Townsend Brady; "How a Girl Can Work Her Way Through College," "Conversation and Good Form in Public Places," etc. Pictorially the August Journal is made unusually sumptuous by the work of nine illustrators and by innumerable photographs. "Through Picturesque America" will command particular attention, and Howard Chandler Christy's "American Girl in Society" is another notable artistic feature. A waltz, "Golden Poppies," is attuned to the slumberous summer days, and is exceedingly pretty.

Among the vessels clearing from Jacksonville last week with wood products were the following: Schooner Anna Pendleton for Noank, Conn., with 400,000 feet of yellow-pine lumber; schooner Greenleaf Johnson for New Haven with 310,000 feet; steamship Roanoke for Philadelphia with 275,000 feet; steamship Iroquois for New York with 225,000 feet of lumber and 4000 crossties, with other cargo, and steamship Algonquin for New York with 250,000 feet of lumber and 5529 crossties, with other cargo.

The Columbus (Ga.) Manufacturing Co. has about completed its mill. The main building is entirely finished, the boilers and sprinkling system are being installed, and twenty carloads of the textile machinery is on the ground ready for erection in its place. The mill is so constructed with a view of operating 25,000 spindles, although but 10,000 spindles will be operated from the start. The spindles are expected to be running by November.

William Pike of 1015 Arch street, Philadelphia, Pa., writes regarding the rug factory which he contemplates establishing, as noted last week. Mr. Pike represents a large Smyrna rug manufacturing company which is seeking a location for plant at a point where labor is cheap and plentiful and local capital can be interested. Danville, Va., is the most interesting point investigated so far.

The Mansfield Lumber Co. of Mansfield, Scott county, Arkansas, has been chartered, with a capital stock of \$15,000, which has been subscribed. The officers of the company are B. J. Bunson, president; A. E. Peer, vice-president; George E. Otis, secretary and treasurer.

The Mabank Land Co. has been formed at Mabank, Texas, to do a general real-estate business. It is capitalized at \$20,000. Dodge Mason is one of the directors.

COTTONSEED OIL.

This department is open to the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Cottonseed-Oil Notes.

It is stated that the Anson Oil & Ginning Co. of Wadesboro, N. C., is about to build an oil mill of forty tons daily capacity. The site has been selected, and an artesian well will be bored for water supply.

J. H. Crutchfield of Atlanta, Ga., has been visiting a number of Southern cottonseed-oil mills relative to their improvement. Acting as engineer and machinist, and with full knowledge of cottonseed-crushing machinery, the services of J. H. Crutchfield are proving of value to many oil manufacturers.

The Americus Oil Co. of Americus, Ga., recently made a shipment of 825 tons of cottonseed meal to Germany, the shipment netting a good price. It was shipped via Savannah, and the cars made up a solid freight train. It is stated that other large shipments by the same company will likely be made.

The Nacogdoches Cotton Oil Co. at Nacogdoches, Texas, has all of its seed buyers employed for the next season, and is reaching out into new territory for the product. The Houston mills have their buyers engaged at Nacogdoches, and Shreveport is also represented. Lively competition in cottonseed is expected next season.

The Texas & Indian Territory Oil & Cotton Co., with headquarters at Sherman, Texas, has been chartered, with a capital stock of \$175,000. The company will operate a cottonseed-oil plant, having purchased the Farmers and Feeders' Oil Mill, one each in Medill, I. T., and Ralph, I. T. The stockholders reside in Texas and the Indian Territory. The incorporators are N. B. Birge, J. A. Steinfeld and John Grant.

Cottonseed products in Texas are nominally steady, and operations in the general market limited, as usual at this period of the season. Prime crude oil, loose, is quoted at 30 to 31 cents, and prime summer yellow oil 33½ to 34 cents; linters, per pound, 4½ to 5 cents, all f. o. b. mill interior points, according to location; cottonseed meal and cake, \$22.50 to \$22.75 per ton, and hulls, baled, \$5.50 per ton delivered at Galveston.

The market in New Orleans for cottonseed products is quiet, with values for oil about steady. There is some export demand for cottonseed meal and cake, and prices rule firm. Receivers' prices for the various products are as follows: Cottonseed, \$15 per ton (2000 pounds) delivered here; cottonseed meal jobbing at depot, \$22 per short ton and \$23 to \$23.75 per long ton for export f. o. b.; cottonseed oil, 25 to 26 cents per gallon for crude loose f. o. b. in tanks here; in barrels 28 cents, and 34½ to 35 cents for refined oil at wholesale and for shipment; oilcake, \$23.75 to \$24 per ton f. o. b.; linters—A, 4½ to 5 cents per pound; B, 4 to 4½ cents; C, nominal; hulls delivered at 20 cents per 100 pounds, according to the location of the mills.

The Commercial and Industrial Association of Montgomery, Ala., with its accustomed enterprise, is circulating copies of its annual reports, together with full reports of the papers presented at the annual meeting of the Alabama Commercial and Industrial Association at Decatur last April. Mr. Alexander Rice is president of the Montgomery organization, and Mr. L. L. Gilbert is its secretary.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., August 1.

There is very little improvement in the local lumber trade of this port, and business is of moderate volume. Manufacturers and dealers look for an early fall trade, and indications point to a good demand from Northern sources, as buyers in that section are already in the market. The market for hardwoods is generally very steady as to prices, poplar being in fair demand. White oak is also showing more strength. The demand from out-of-town dealers is only moderate, and among all woodworking concerns there is a disposition to carry very little additional stock until business shows more improvement. In the foreign export trade matters are dull, and while some heavy shipments are going out to Europe, they are generally to fill old contracts. In North Carolina pine there is a fair trade in progress, and prices for kiln-dried lumber are generally firm for the better grades and easier for common grades. There is very little doing in air-dried yellow pine, and the demand is very light, both from yardmen and others.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., July 30.

The trend of trade during the present month in nearly every avenue of the lumber industry in this section is towards an improvement in the general conditions of the market. While the demand for North Carolina pine has not been of great volume during the month, there has been a steady trade in progress. During the past week there has been considerable inquiry from Eastern concerns, and indications point to reduced stocks at Northern and Eastern centers, with the demand from these sources steadily increasing as autumn approaches. Manufacturers report a number of good orders during the week, nearly all for the better grades, and at list prices. There is also a good foreign demand, and several large orders have been filed during the week. The demand for dressed lumber is more pronounced, and shipments are liberal. Stocks of lumber at all milling points are ample for the demand, and in few grades or dimensions is there any excessive supply. The local trade is good, and the demand for lumber for building purposes is brisk. A most vigorous movement is present in the development of suburban tracts, and an immense quantity of building material is going into consumption in that direction. The offering of vessels for carrying lumber is light, and rates about steady at \$2.25 to \$2.40 to New York and Sound ports, and \$3 to Boston.

Charleston.

[From our own Correspondent.]
Charleston, S. C., July 30.

The outlook for an early improvement in the lumber industry is considered by many engaged in the trade as somewhat more promising than it was sixty days ago. In this particular section the volume of business keeps about the same from week to week, and there is a steady demand for all desirable grades of lumber. At Georgetown, nearby, the situation is considered rather more encouraging, and the mills are generally running on the scheduled time. The regular bi-monthly meeting of the Atlantic Coast Cypress Association was held in that city on the 18th inst. It was found at this

meeting that the holdings of the entire membership of this association were but 6,000,000 feet of dry stock on hand, against 27,000,000 feet on July 1, 1899. The members of the association manufacture 180,000,000 feet annually, and the stock of green and dry lumber on hand at the date of the meeting was 30,000,000 feet. It is stated that the Atlantic Coast Lumber Co. at Georgetown has purchased the entire plant, timber lands and tramways of the Tilghman Lumber Co. The company will take charge of the plant at once, and will continue to operate it. During the past week the shipments of lumber from Charleston were as follows: Schooners Julia A. Trubee with 350,000 feet of lumber; Georgetown Lawrence, 240,000 feet; William Neely, 644,000 feet, and Edgar C. Ross, 310,000 feet, all for New York. The Clyde steamers Carib with 40,580 feet of lumber and Iroquois with 42,308 feet cleared for New York. Prices for all grades of lumber are generally steady, and manufacturers are not disposed to accept lower prices. The rates on lumber to Northern and other points remain about the same, and the offering of handy-sized vessels light.

Mobile.

[From our own Correspondent.]
Mobile, Ala., July 30.

The general trade of this port during the month has been unusually good, and everything indicates a continuance of activity during the fall and winter months. Along the wharves and docks there are at present numbers of steamers and sail vessels loading for domestic and foreign ports, while the receipts of various commodities of trade continue to swell the business of the city. There is at the moment a most vigorous development of the various resources adjacent to this city, and it is stated that Dauphin Island, with its great depth of water, may be utilized as the deep-water port of Mobile. The Gulf Land & Harbor Co. has been incorporated, and the purpose of the company is the leasing of lands for the building of piers, wharves, docks, etc. Dauphin Island will be the headquarters of the company, and it is thought that the ultimate purpose of the Mobile & Ohio in the building of the road to Portersville was with the intention of making Dauphin Island its terminal. In all commercial and industrial avenues the outlook for trade seems promising, and in the primary industry of lumber and timber the situation at present is more encouraging. The shipments of lumber last week aggregated 5,316,595 feet, and for the season 140,971,595 feet, against 70,751,493 feet for the season of 1898-99. Of the shipments of lumber last week, nearly 4,000,000 feet went to Europe, and the balance to Cuban, Central American and South African ports. The demand from Germany for cheap grades of yellow-pine lumber is active, and for a class of lumber that has never had a market value, so that should the shipments just made prove suitable for the purposes designed a very large trade is likely to accrue. There is a great improvement in trade with South America, and several orders will go forward in early August to ports of that country. Sawn timber is steady, with a good inquiry, 373,154 cubic feet going out last week, while of hewn timber 85,213 cubic feet were shipped. Values for both hewn and sawn timber are steady at 15 cents per cubic foot. Hewn oak is quoted at 15 to 18 cents per cubic foot, and hewn poplar at 12 to 13 cents. Saw logs are in good demand at \$5 to \$10 per 1000 superficial feet for pine, poplar logs at \$8 and oak logs at \$8 to \$12 per 1000 superficial feet. Lumber and timber freights are firm and unchanged, with a moderate offering of de-

sirable vessels. Lumber is quoted \$8 to \$10 to West Indies, \$9 to \$12 to Mexico, \$16 to Rio Janeiro, \$14 to \$14.50 to River Platte, \$7 to \$8 coastwise, and \$8 to \$9.50 to Cuba. Timber to United Kingdom or Continent £5 17s. 6d. to £6 2s. 6d. per standard for steam; sail, 36s. to 38s. per load for hewn, and £5 10s. to £5 15s. for sawn.

Memphis.

[From our own Correspondent.]
Memphis, Tenn., July 30.

Trade in the various lines of the local lumber market, while not of great volume, shows considerable vitality, and there are many features which indicate a return of activity characteristic of the approach of the fall season. The general demand for lumber has been better during the past week than for several weeks previous. Prices are fairly well maintained, and among the various woods of commerce traded in poplar shows considerable strength, firsts and seconds selling at \$30 and \$32, with holders not disposed to offer freely at these prices. Ash is in good request, and values generally very steady, red ash being in good demand at top figures. In plain sawed oak there has been some business, but on the whole the entire volume of trade in hardwoods is limited in character. Reports from logging sections in the interior are to the effect that a scarcity of timber will soon be felt, as logmen are doing very little at present. Should a scarcity of timber occur, better prices for lumber will likely prevail, which manufacturers and dealers are mostly looking for. Exporters are now feeling much better over the announcement of better rates for ocean transportation, and the market has generally been stronger under these favorable conditions. Manufacturers are generally of the opinion, notwithstanding this is the year of the presidential election, that the fall trade will open up early. Yardmen are beginning to look over their stocks, which in many cases are considerably reduced; the demand from woodworking concerns will likely show an increase over former years, and the outlook seems pretty well assured for more than an average fall and winter business.

Lumber Notes.

Receipts of lumber last week at the port of New Orleans amounted to 2,800,000 feet, and for the season 90,921,115 feet, against 88,424,525 feet last season.

The Parrott Lumber Co.'s mill at Richwood, Ga., together with drykiln and a quantity of lumber, were destroyed by fire on the 26th ult. The loss is about \$25,000, partly insured.

The Atlantic Coast Lumber Co. of Georgetown, S. C., has purchased the entire plant, timber lands and tramways of the Tilghman Lumber Co. The company will take charge of the plant at once and continue to operate it.

The Bradley Timber Co. has been incorporated, with a capital of \$10,000, to operate a saw-mill and railroad near Beaver Meadow, Ala. Noel E. Turner of Vinegar Bend, Ala., and E. G. Bradley of Citronville, Ala., are the directors.

The Palmetto Lumber Co. of Cheraw, S. C., will erect a saw-mill for the development of 20,000 acres of timber lands in Chesterfield county, South Carolina. A logging road will be constructed, and the plant will be for both rough and dressed lumber.

The C. L. Ritter Lumber Co.'s mill at Ritter's Siding, W. Va., on the Norfolk & Western Railroad, was destroyed by fire on the 27th ult. The mill was insured for \$12,000, about one-fourth its value. It is stated that the plant will be rebuilt as soon as possible.

The Bellamy Planing Mill Co. of Florence, Ala., has been reorganized and capitalized at \$15,000. Dr. A. D. Bellamy is president of the company, and Walter W. Lynn, secretary. The board of directors is composed of the officers of the company and John T. Ashcraft.

It is stated that the Chicago Export Co., with headquarters at Ruston, La., has closed a contract with the Urania Lumber Co. of Urania, fifty miles north of Alexandria, La., on the Iron Mountain Railway, for 2,000,000 feet of lumber to be delivered inside of the next twelve months.

Work on the plant of the Graham Lumber Co. at St. Marks, Fla., has been resumed, with C. C. Yonge of Pensacola as manager. The shingle mill has a capacity of 100,000 per day. The lumber mill will be in operation shortly, with a capacity of 50,000 feet of lumber and 50,000 laths daily.

The movement in lumber last week at Mobile, Ala., was of unusual volume, 5,316,595 feet having left that port, about 4,000,000 feet going to Europe and the balance to Cuban and Central American ports. Shipments of sawn timber aggregated 372,154 cubic feet, and of hewn timber 85,213 cubic feet.

The Dantzer Lumber Co. of Scranton, Miss., has eighteen miles or fully one-half of the railroad from Howson to Bluff creek finished. The Howson road will run through an untouched belt of the finest timber. The company has received rolling stock from Mobile, and everything on the road is in running order.

A stock company composed of the leading business men of the city was organized last week at Hattiesburg, Miss., for the establishment of a sash, blind and door factory. Stock to the amount of \$10,000 was subscribed, and when paid in the building of the factory will begin. The factory will be a chartered institution, capitalized at \$25,000.

The Southern Lumber Manufacturers' Association has under date of July 18 advanced the following items in yellow pine: A and B edge-grain flooring, \$1; No. 1 common flooring, four and six-inch, 50 cents; Nos. 1 and 2 common dimension, ten to twenty feet in length, 50 cents; No. 1 common dimension, twenty-two to twenty-four feet in length, \$1 per 1000 feet.

The planing mills and lumber-yards of T. J. Dudley & Sons, Butts, Cooper & Co., the Columbus Iron Works and W. T. Harvey, which comprise the principal ones of Columbus, Ga., commenced work on the 26th ult. They were running with nearly a full force of men picked up from other cities. The introduction of non-union men is perhaps virtually the end of the strike.

A large deal in mountain timber lands was consummated last week at Mt. Sterling, Ky., J. W. Clay selling a one-half interest in 4683½ acres of timber land in Menefee county to J. L. Lombard of Hastings, Mich. Messrs. Lombard & Clay will build a narrow-gauge railroad to their timber, a distance of five miles. They will also erect a large saw-mill and saw all their timber.

Messrs. John L. Stone and F. L. Andrews of Coudersport, Pa., closed a deal last week in Knoxville, Tenn., purchasing 42,000 acres of timber land on Citico creek, in Monroe county. It is understood that these gentlemen will at once begin the work of cutting down the timber and sawing it for market. A number of large saw-mills will be erected at different points on the property, which will be developed into one of the largest lumber camps in Tennessee.

MECHANICAL.

South Carolina State Capitol Building.

The South Carolina State Capitol building was commenced in 1850, and will be finished in 1901, \$175,000 having been appropriated to complete it. Frank P. Milburn of Columbia, S. C., and Charlotte,

ence in sharpening and resetting the knives. Pressure bar after the upper cylinder acts as a bar over the lower cylinder, and is adjusted by means of small hand-wheel at the side of machine, avoiding separate adjustment. Further particulars of this No. 14½ double-cylinder surfacer may be obtained by addressing the maker.

The idea constantly in view in designing this plant has been to obtain the highest results in materials and workmanship at the lowest practicable expense.

This plant is to do all the repairs of the company's numerous fertilizer and phosphate plants and floating property, and to make some of the machines used in the mills.

of the best crucible steel, two sides of head being faced with steel to form the lips, this combination having been found by long experience to produce a cutter-head of great strength and durability.

Upper cutter-head is belted at both ends.

Bearings are one and three-quarters inches in diameter, those of the upper head being eight inches long, and journals babbitted with the best quality of metal.

Lower cutter-head rests upon a cradle or slide, so arranged that it can be drawn out, giving free access to the knives for adjusting or sharpening, or can be entirely removed from the machine instantly without disturbing other parts. Knives can be adjusted exactly to cut while head is drawn out.

Feed rolls are four inches in diameter, the upper rolls being heavily geared and weighted, giving a very strong and positive feed. Weights are entirely beneath the machine, out of the way. Three changes of feed are furnished.

Feeding-out rolls are placed behind the cutter-heads so lumber will be fed entirely free from the planer after being planed, the arrangement of the lower head allowing this to be done without adding materially to length of the frame.

The machine is equipped with a heavy swinging chip-breaker, set close to cut of knives to prevent tearing in planing cross-grained lumber.

Machine can be changed almost instantly to do single surfacing, as all that is required is to draw out lower head, no other adjusting being necessary.

Tight and loose pulleys, twelve inches diameter, six-and-one-half-inch face, and should run 950 revolutions per minute.

Weight of 24-inch machine, with countershaft, 2500 pounds; floor space, 4x5 feet.

This planer is built by the Frank Machinery Co. of Buffalo, N. Y.

Secretary Long of the Navy Department has written to Mayor Jones of Galveston accepting the offer to the government of Pelican Island, in Galveston harbor, as the site of a coaling station for

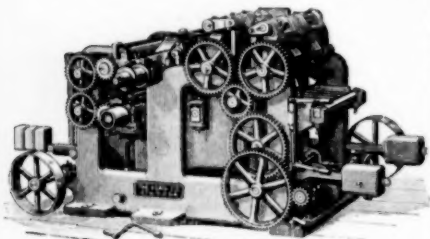


THE SOUTH CAROLINA STATE CAPITOL BUILDING.

N. C., was selected to prepare plans for the front and rear approaches and dome. An illustration is presented of the building as it will appear when completed. It will then have cost the State \$2,300,000. During the civil war Sherman's army shelled this building, several of the shells striking the main body of the house. The walls were so heavy, however, that the shots damaged it but very little.

Double-Cylinder Surfacers.

Southern and Pacific coast lumbermen and operators of large box factories will find of interest the following brief reference to a new double-cylinder surfacer manufactured by the J. A. Fay & Egan Co. of Cincinnati. An illustration of the machine is seen herewith. This surfacer will be found to possess many mechanical advantages and conveniences claimed to be found in no other surfacer. This machine will plane thirty inches



DOUBLECYLINDER SURFACER.

wide, both sides, and twelve inches thick. The cylinders are three-sided, of solid steel forgings, and are slotted for carrying three knives. The feed consists of six powerfully-driven rolls eight inches in diameter, all having parallel lift, so as to give full bearing across the entire surface of the material being planed. The two upper rolls before the cylinder are divided, each section being center-geared and separately driven and weighted. The lower rolls are driven by large expansion gearing. The lower cylinder is mounted in a long dovetailed slide, and can be quickly drawn out endwise for conven-

A Model Machine Plant.

The demands of modern competition call for extreme care from the outset in the erection and equipment of industrial plants. Machine plants are especially of a character that makes it absolutely necessary they should be designed from their inception, so that the highest results may be obtained at the lowest practicable expense. A model plant has been in course of erection for some time near Charleston, S. C., for the Virginia-Carolina Chemical Co.

The machine shop is 60x100 feet, brick walls and wooden roof, large skylight and ventilator, equipped with lathes ranging in capacity from eighty-four inches swing to twenty inches swing, large planer, two shapers, two pipe-cutting and threading machines, large and small drilling machines, hydraulic wheel press and smaller appliances.

The iron foundry has a molding floor 40x80 feet, and is equipped with two Colliat cupolas, one being forty inches and the other twenty-eight inches inside diameter, also a 10-ton swinging crane, a brick core oven 12x20 feet, an iron core oven five feet diameter and six feet high, with revolving shelves and ladles of most approved design in all sizes. The building is thoroughly lighted and ventilated.

The forge shop is 40x60 feet, and is equipped with a steam hammer, swinging crane and two forges, space being provided for two additional forges.

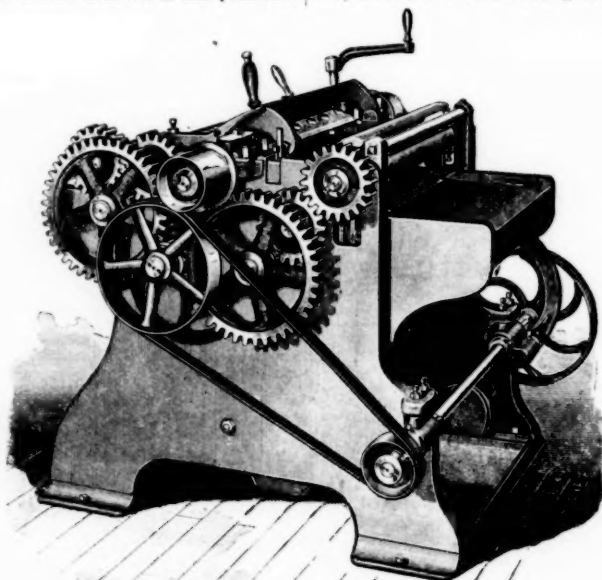
A railroad spur runs entirely through the machine shop to the center of the crane in the forge shop. A narrow-gauge track runs from the foundry building into the machine shop, so that heavy castings may be taken from the crane in the foundry and delivered on cars in the machine shop or to an overhead traveling crane which traverses the entire length and middle portion of the machine shop.

The brass foundry is now building. It will have an equipment in consonance with the other departments, so that brass castings, both large and small, may be made with accuracy and despatch.

Mr. Samuel Hughes, manager of the Charleston Iron Works at Charleston, S. C., designed this model plant.

Double Surface Planer.

One of the most generally used of woodworking machines is the planer, and managers of establishments wherein such machines find a place will be interested in the planer we illustrate. This machine is known as the new heavy double surface planer "101." In building this machine the maker believes it has produced



DOUBLE SURFACE PLANER.

a planer that will do more and better work than any other of its size and cost. The illustration shows that this planer is very compact and substantial, and it is designed to do first-class work on hard or cross-grained lumber. The machine is built in two sizes, to plane twenty-four and thirty inches wide and six inches thick.

The cutter-heads are cast upon shafts

naval purposes. The department will recommend to the next session of Congress an appropriation for the improvement of the site. This will cost from \$65,000 to \$80,000, according to the material used.

More than 17,000 barrels of flour have been shipped this season to Europe by a Fort Worth (Texas) mill.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with every one interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Pipe Works.—The United States Cast Iron Pipe & Foundry Co. will resume operations at once.

Beaver Meadow—Saw-mill.—The Bradley Timber Co. has been incorporated, with capital stock of \$10,000, by Noel E. Turner of Vinegar Bend, Ala., and E. G. Bradley of Citronelle, Ala., for establishment of saw-mill.

Bessemer—Furniture and Coffin Factory.—The Bessemer Furniture Manufacturing Co., recently reported as organized, will erect building two stories high, 60x80 feet, and when completed equip it with machinery for the manufacture of coffins and furniture; capital stock will be \$7000; E. B. Canoles, principal.*

Bessemer—Rolling Mill.—The Tennessee Coal, Iron & Railroad Co. will organize its working forces for the Bessemer Rolling Mill and put the plant in blast this week, employing 700 men.

Demopolis—Cement Works.—T. P. Lindhart of New York, who is said to be representing English capitalists, has purchased 450 acres of limestone lands contiguous to Demopolis, and will erect cement works, as reported last week. Capacity will be 500 barrels per day. R. P. Knox or Gessner Williams of Demopolis can probably give particulars.

Dothan—Electric-light Plant.—The city has appropriated \$10,000 for erection of an electric-light plant. Address "The Mayor."

Florence—Planing Mill.—The Bellamy Planing Mill Co. has reorganized, with capital stock of \$15,000. Dr. A. D. Bellamy is president; Walter W. Lynn, secretary.

Gadsden—Iron Foundry and Machine Shop.—Christopher Bros., manufacturers of carriages and wagons, have decided to add a foundry and machine shop, and awarded contract for blacksmith and wood-shop building, two stories, 100x50 feet, foundry 50x50 feet and machine-shop building 50x50 feet. An office and storeroom 78x100 feet will also be erected. Improvements will cost about \$15,000.

Greensboro—Cotton Ginnery.—Blount & Ward are building a ginnery; building will be of brick, 60x40 feet.

Hanceville—Coal Mines and Coke Ovens.—

The Stout Mountain Coal & Coke Co. is now preparing to open coal mines and build several coke ovens at a point eight miles from Hanceville; contract has just been let for construction of a branch of the Louisville & Nashville Railroad to the company's mines.

Huntsville—Brick Works.—Sam North & Co. will establish a steam brick plant of 65,000 bricks daily capacity.

Leeds—Iron Mines.—Castleman & Elliott will resume mining brown ore on Oak Ridge.

Montgomery—Okra Evaporator.—John Bradford (of Springfield, Ill.) has established near Montgomery a plant for evaporating okra. Later a company may be organized to erect larger evaporating plant.

Russellville—Brown-ore Mines.—The Sloss-Sheffield Steel & Iron Co., J. W. McQueen, secretary, Birmingham, Ala., has purchased the brown-ore properties at Russellville of Morris Adler and associates, also of Birmingham, and will operate same.

Tuscaloosa—Cannery and Creamery.—A cannery and a creamery will be established. F. G. Blair, manager Commercial Club, may be addressed.

ARKANSAS.

Dodd City—Zinc Mines.—The Tarkila Zinc Mines Co., lately mentioned under Yellville, Ark., is opening zinc mines in Marion county, near Dodd City. Buildings and machinery will be erected and installed at once. The company is of Providence, R. I., with offices at 442 Banigan Building; J. Warren Lander, president; Elissa W. Cross, vice-president, and Olin Hill, secretary. Jos. Gilbert, treasurer, can be addressed at Dodd City, Ark.

Harrison—Lead and Zinc Mines.—The Silver Hill Zinc & Lead Mining Co. has been incorporated, with capital stock of \$30,000, by H. Loomas, president; E. L. Green, vice-president; A. D. Arbogast, secretary and treasurer.

Harrisonville—Zinc Mines.—A. D. Arbogast will superintend the work of constructing a plant at Harrisonville for developing the zinc mines of the Denison (Texas) Lead & Zinc Co., recently organized.

Hot Springs—Electric Plant.—The Hot Springs Street Railway Co. has made preliminary arrangements for the erection of its proposed new plant. This plant is to supply power for the railway and lights and power for commercial purposes. A Pittsburg (Pa.) engineer has prepared plans for the plant.

Little Rock—Cotton Compress.—The Forest City Roundup Bale Co. has been incorporated, with capital stock of \$8000. B. B. Harvey is president; A. J. Soderer, vice-president, and T. H. Hutchinson, secretary.

Mansfield—Lumber Company.—The Mansfield Lumber Co. has been incorporated, with capital stock of \$15,000, by Benj. A. Bunson, president; A. E. Peer, vice-president; Geo. E. Otis, secretary and treasurer.

Mountain Home—Mining.—The White River Mining & Developing Co. has been incorporated, with capital stock of \$600,000, by B. E. Massey, president; L. L. Runion, vice-president; Joseph Ward, secretary, and Rudolph Brown, treasurer.

Paragould—Cotton Gins.—A. J. Langdon, S. L. Joseph and J. D. Block have incorporated the Langdon Gin Co., with capital stock of \$5000, to operate cotton gins.

FLORIDA.

Bellevue—Stave Factory.—Charles Brown has secured building and is installing machinery for the manufacture of barrel staves for turpentine stills.

Ocala—Cold-storage Plant.—Simon Benjamin is building a cold-storage addition to his ice factory.

Pensacola—Electric-power Plant.—The Pensacola Electric & Terminal Railway Co., W. H. Northrup, president, will make extensive improvements to its electric-power plant, including the installation of an additional 100-horse-power dynamo.

Pensacola—Cotton Compress.—The William H. Bierce Co., Limited, of New Orleans, La., will establish a cotton compress at Pensacola at a cost of \$75,000.

GEORGIA.

Atlanta—Implement Works.—F. I. Stone has purchased for himself and associates the Southern Agricultural Works at \$33,350. It is the intention to organize a new company

and continue the operation of the extensive implement works.

Augusta—Mercantile.—The Augusta Grocery Co. has been chartered by J. C. Lee, J. T. Bothwell, Paul Mustin, J. L. Fuller and William Martin, with capital stock of \$250,000. The new company is a consolidation of Lee & Bothwell, Fuller & Martin and Paul Mustin & Co.

Canton—Pyrites Mines.—Aaron Haas of Atlanta, Ga., has purchased for Birmingham and Nashville people property in Canton containing pyrites, which will be developed.

Columbus—Cotton Mill.—The Columbus Manufacturing Co. has completed its buildings and commenced the installation of 10,000 spindles and complement of looms, to be in operation by November; company has built for 25,000 spindles (an increase of 5000 spindles since the previous report of this project), and the other 15,000 spindles will be installed next year. The completed plant will represent an investment of about \$500,000.

Dahlonega—Gold Mine.—Atlanta parties are investigating with a view to securing the Reynolds mine at Dahlonega from John Martin. If the property is obtained it will be equipped with air compressor, power drills, pumps, hoists, crusher, concentrators, etc.

Dalton—Electric-light Plant.—The city does intend to put in an electric-light plant, as mentioned recently, but not at present. At the earliest it will be some time next year before arrangements are made.

Fort Valley—Orchard Company.—J. B. James, J. R. Kinney, A. M. Parker, M. G. Tuttle and others have incorporated the James Orchard Co. to cultivate fruit, manufacture crates, etc., capital stock being \$10,000.

Georgia—Iron Mining.—The Georgia Manganese & Iron Co. has been incorporated, with capital stock of \$500,000, by R. A. Silk, J. S. Manfull, M. Willis, T. A. Ross and G. G. Power, Jr., all of New York city.

Griffin—Water-power Development.—Young A. Gresham, No. 8 South Broad street, Atlanta, Ga., is interested with the Eastern capitalists reported recently to develop the Flat shoals, in Meriwether county, for transmitting and furnishing power to manufacturing enterprises.

Richwood—Saw-mill.—The Parrott Lumber Co. is rebuilding its No. 1 saw-mill, reported burned.

Rome—Mining and Manufacturing.—C. B. Wilburn, J. C. Lamb, C. M. Harper and J. E. Dean have incorporated the Rome Mining & Manufacturing Co., with capital of \$1800, for mining, refining and manufacturing aluminous clays, as well as iron and other metallic ores.

Rome—Chemical Works.—The Rome Guano Co. has awarded contract for erection of a \$10,000 building, to be equipped for doubling plant's capacity.

Savannah—Rice Mill.—The Savannah Rice Mill Co., lately reported, has awarded contract for erection of its mill to Philip Rahn of New Orleans. Address John Screven, Jr., 216 West Bay street, manager.*

Thomson—Cotton Mill.—The John E. Smith Manufacturing Co. has completed and put in operation its 2500-spindle cotton mill for making warps, yarns and skeins; capital invested about \$50,000.

Valdosta—Telephone System.—The Mutual Telephone Co. is being organized for construction of a telephone system. Names of interested parties to be announced later.

Winder—Knitting Mill.—The Winder Knitting Mill has been organized, stock subscribed and machinery ordered for establishment of a knitting mill.

Wrightsville—Knitting Mill.—T. J. Arline contemplates establishing a mill to knit underwear and hosiery for ladies' wear.*

KENTUCKY.

Calhoun—Water-works.—Alfred Walker of New Albany, Ind., has prepared estimates for water-works at Calhoun which call for a 40-horse-power boiler, tower forty feet high and tank of 40,000 gallons capacity, duplex pump of 300 gallons per minute, etc.

Cave City—Marble Quarry.—J. W. Parkhurst, G. T. Parker and S. S. Gorbey, all of Indianapolis, Ind., have incorporated the Kentucky Onyx Co., with capital stock of \$300,000, for the development of onyx marble quarries at Cave City.

Corbin—Coal Mine.—Mrs. Sarah M. Gray has recently opened a coal mine near Corbin.

Covington—Cordage Mill.—The Overman

& Schraeder Cordage Co. proposes increasing its capital stock from \$100,000 to \$200,000.

Frankfort—Flour Mill.—L. B. Weisenburgh is remodeling his flour mill and putting in new machinery.

Gray—Coal Mine.—The North Jellico Coal Co., operating a coal mine near Gray, is preparing to open up another mine about six miles from its present plant; electric-mining machinery, electric haulage and automatic tipples will be installed; capacity will be about 1000 tons per day; contracts for buildings, machinery and material will be awarded soon; C. S. Nield, general manager.

Hopkinsville—Saw-mill.—W. W. Kingston and L. E. Little of Mortons Gap have purchased and will establish saw-mill at Free Henry Ford.

Knox County—Coal Mines.—It is reported that a syndicate of Baltimore people are negotiating with Riddell & Sprout of Barbourville, Ky., for the purchase of 20,000 acres of coal lands in Knox county. If the deal is consummated it will necessitate an expenditure of about \$500,000 to open up the mines.

Louisville—Tobacco Factory.—Nat F. Dorch & Sons will establish tobacco factory.

Louisville—Flour Mill.—The Ballard & Ballard Company will erect a new steel building to cost \$10,000 and install milling machinery at a cost of \$38,000.

Louisville—Packing Plant, etc.—It is reported that the Armour Packing Co. of Chicago will extend its Louisville plant by the addition of a \$250,000 equipment and building; it is also rumored that the company will erect slaughter-houses, packing plants, etc., increasing its investment here to \$1,000,000; R. W. Rollins, local manager.

Maysville—Boat-building Yard.—W. B. Mathews & Co., operating saw-mill, will add a boat-building yard to their establishment.

Mt. Sterling—Timber-lands Development.—J. T. Lombard of Hastings, Mich., has purchased a one-half interest in the timber lands in Menifee county of J. Will Clay and Lombard & Clay; will build a narrow-gauge five-mile road to the lands to further development.

Paducah—Iron Works.—Efforts are being made for the establishment of a \$1,000,000 ironworking plant. Secretary Commercial Club may be addressed.

Pineville—Oil Wells.—The Bell Oil Co., reported lately as incorporated, has one producing well, one nearly completed and about 9000 acres of leases in Bell and Knox counties; it will put down four more wells within the next ninety days; C. W. Metcalf, president.*

Springfield—Water-works.—Alfred Walker, New Albany, Ind., has prepared estimates for water-works at Springfield to consist of tower forty feet high and tank of 20,000 gallons capacity, storage basin of 3,000,000 gallons, 50-horse-power boiler, duplex pump with capacity of 320 to 360 gallons per minute, pumping station, etc.

LOUISIANA.

Baton Rouge—Sewerage System.—L. W. Brown of New Orleans, La., has received contract at \$50,000 for constructing the city's proposed sewerage system.

Lafayette—Brick Works.—The erection of brick works is talked of, and A. D. Martin is mentioned in connection with the enterprise.

New Iberia—Woodenware Factory.—N. P. Hacker (address, Box 266) contemplates establishing a factory for making buckets, tubs and other woodenware.*

New Orleans—Saw-mill.—Hackley & Hume of Muskegon, Mich., have purchased cypress stumpage near New Orleans, as lately reported, but have no intention of erecting saw-mill to manufacture the timber at present.

MARYLAND.

Baltimore—Chocolate Factory.—The Headley Chocolate Co. has been incorporated for the manufacture of chocolate, candy, etc., by John Lauer, John J. Suter, Frank O. Headley and others. The capital stock is \$20,000.

Baltimore—Fertilizer Factory.—Griffith & Boyd have commenced the erection of new fertilizer factory to replace the plant burned recently. New building will be three stories high, 200x250 feet, and cost, with machinery for manufacturing, about \$60,000.

Cecil County—Gold and Silver-bearing Lands.—James D. West, Port Deposit, Md.,

has discovered gold and silver-bearing properties in Cecil county, and will develop same.*

Cumberland-Coal Mines, Mining Plant, etc.—The Stuart Coal & Coke Co., a branch of the Davis (W. Va.) Coal and Coke Co., will build a new town to be called "Stuart," and will begin mining coal within a short time. Machinery and appliances will be installed, including electric haulage. Compressed air furnished by a plant erected for that purpose will be used.

Frederick-Copper Mines.—W. J. Ayers, operator and owner of the Liberty copper mines, has organized a company in Philadelphia, Pa., to operate the mines on a large scale. Two concentrators of 100 and 50 tons daily capacity, new air compressors and other machinery will be installed.

Garrett County-Coal Mines and Coke Ovens.—Eugene D. R. Sutton of Philadelphia, Pa., representing Reakirt Bros. & Co. of Philadelphia, has purchased 1500 acres of coal lands lying in Garrett county, Maryland, and in West Virginia at a cost of \$200,000. A company will be organized to develop coal mines and erect coke ovens.

Hobbs-Charcoal Manufacturing.—Thomas J. Williams has commenced the burning of charcoal on tracts of land near Hobbs.

Hobbs-Package Factory.—H. Clay Hobbs has established a basket and package factory.

Washington, D. C.—Chemical Works.—The Washington Chemical Co. has been incorporated for the manufacture of fertilizers; capital stock \$100,000; incorporators, M. M. Parker, J. F. Wilkins, E. S. Parker, L. Beyer, Jr., and others, all of Washington.

Washington, D. C.—Publishing.—The Elliott Printing Co. has been incorporated to conduct a general printing, publishing and lithographing business, by J. V. A. Shields, president; Rufus P. Clark, secretary and treasurer; capital stock \$5000.

MISSISSIPPI.

Hattiesburg-Sash, Door and Blind Factory.—A company is being organized, with capital stock of \$25,000, for establishment of a sash, door and blind factory. Names of interested parties to be announced later.

Jackson-Machine Shops.—The Gulf & Ship Island Railroad Co. is considering locating shops at Jackson; S. S. Bullis, general manager, Gulfport, Miss.

Techula-Railroad Shops.—The Yazoo & Mississippi Valley Railroad Co. will expend about \$200,000 for erection of roundhouse 300 feet in diameter, coal chutes, repair shops, fifteen miles of sidetracks, etc.; J. T. Harahan, vice president, Park Row, Chicago.

MISSOURI.

Centertown-Milling.—Chartered: The Centertown Milling Co., with capital stock of \$5000, by John English, B. W. Lansdown, C. A. Dirk and others.

Kansas City-Lumber Company.—The Tom Highby Lumber Co. has been incorporated, with capital stock of \$130,000, by N. C. Wright, C. W. Ogden, Frank Hagerman and others.

Kirkwood-Creamery.—The Kirkwood Creamery Co., capital stock \$55,000, has been incorporated by E. F. Stone, Alex. Kessler and E. Heinzelman.

St. Louis-Zinc Mining.—The Beacon Hill Zinc Co. has been incorporated, with capital stock of \$22,500, by George H. Meader, W. H. Harrison, J. M. Johnson and others.

St. Louis-Chartered: The Unicycle Elevated Railway Construction Co., with capital stock of \$100,000, by J. L. Laprelle, L. A. Brown, Dwight Treadway and others.

St. Louis-Shoe Factory.—The La Prie-Williams Shoe Co. has been incorporated for the manufacture of shoes, with J. L. La Prie, president; J. H. Williams, first vice-president; W. H. Tharpe, secretary, and E. C. Chapman, treasurer. The capital stock is \$600,000.

Sturgeon-Telephone System.—The New Century Telephone Co., reported recently as incorporated, will install a plant with 200 phones. Address Omar D. Gray.

Windsor-Cannery.—The Windsor Canning Co. has been incorporated, with capital stock of \$5000, by M. L. Howard, J. P. Allen, F. C. Livingston and others.

NORTH CAROLINA.

Asheville-Educational.—Chartered: The Asheville School, by N. H. Anderson and others, all of Cleveland, Ohio; capital stock is \$40,000, with privilege of increasing to \$200,000.

Greensboro-Telephone System.—T. J. McAdoo and others have incorporated the Greensboro Telephone Co., with capital stock of \$50,000.

Henderson.—R. F. Taylor of Oxford has secured factory building in Henderson, and will install machinery for manufacture of not less than ten buggies per week.

High Point-Trunk and Excelsior Factory.—The High Point Trunk Co. and the High Point Excelsior Co. have consolidated, and will operate as the High Point Trunk & Excelsior Manufacturing Co., with Geo. A. Mallon, secretary and treasurer; J. R. Brown, superintendent, and A. R. Hammer; additional buildings are being erected.

High Point-Crib and Cradle Factory.—The Snow Basket Co. will install machinery for the manufacture of cribs and cradles.

High Point-Trunk Factory.—A \$5000 company has been organized to build a trunk factory. G. A. Motton is president, and A. E. Hammer, superintendent.

La Grange-Bottling Plant.—The Seven Springs Company, reported some time ago as incorporated, has for its purpose the bottling of the Seven Springs water and manufacturing carbonated beverages.

Lenoir-Cotton Mill.—J. M. Rhodes of Cherryville, N. C., has purchased Devil shoals near Lenoir, and organized the Rhodiss Manufacturing Co., with \$300,000 capital stock to develop water-power and erect a 10,000 spindle and 250-loom mill. Geo. B. Hiss of Charlotte will be president; J. M. Rhodes and C. J. Rhodes of Cherryville, N. C., vice-president and treasurer, respectively. Address the president.

Marble-Saw-mill.—The Eureka Lumber Co. of Passaic, N. J., has purchased 17,000 acres of timber land in Cherokee county, and will install band saw-mill of 75,000 feet capacity, drykiln, etc., and next season will install planing mill. This item was mentioned last week under Cherokee Station.

Raleigh-Water-works Enlargement.—The Raleigh Water Co. will double the capacity of its reservoir; present capacity about 700,000 gallons per day.

Reidsville-Tobacco Factories.—The F. R. Penn Tobacco Co. and Robert Harris & Bro. are each installing new machinery in their tobacco factories, including automatic ordering machines.

Reidsville-Factory.—The Honduras Manufacturing Co. has been organized and equipped a factory; character of product not stated.

Scotland Neck-Machine Shop.—T. H. Hollingsworth has established machine shop.

Spring Hope-Cotton Mill.—Efforts are being made for the organization of a \$100,000 stock company to erect a cotton mill. Address P. L. Woodard.

Spring Hope-Cotton Ginnery.—T. C. May & Son are increasing capacity of their ginnery to thirty bales per day.

Spring Hope-Cotton Gln.—Richardson & Hales are erecting a ginnery with capacity of forty bales of cotton per day.

Wadesboro-Cottonseed-oil Mill.—The Anson Oil & Ginning Co., recently reported as incorporated, is about to build, it is now stated, an oil mill of forty tons capacity in twenty-four hours. Site has been selected; artesian well will be bored for water supply; W. C. Hardison, president.

Williamston-Telephone System.—The Williamston Telephone Co. has been incorporated by W. C. Manning, N. T. Riddick, T. R. Hodges and others for construction of telephone system; authorized capital \$5000.

Wilson-Tobacco Company.—The Carter & Whitehead Tobacco Co. has been incorporated, with capital stock of \$10,000.

Winston-Tobacco-box Factory and Drykiln.—J. H. Shelton is building a large factory and drykiln for making tobacco boxes.

SOUTH CAROLINA.

Aiken-Electric-light and Power Plant.—The Carolina Light & Power Co. has increased its capital stock from \$30,000 to \$50,000, as lately reported, to pay for enlarging its plant.

Charleston-Brokerage Company.—Chartered: The Exchange Brokerage Co., with capital stock of \$5000; R. P. Tucker, president, and W. R. Pinkney, secretary.

Charleston-Machine Works.—The Virginia-Carolina Chemical Co., main office at Richmond, Va., has about completed its extensive machine plant near Charleston, designed to repair the machinery in the company's numerous fertilizer and phosphate plants and its floating property. The machine shop is 60x100 feet; iron foundry 40x80 feet; molding floor forge shop 40x60 feet; and brass foundry will also be erected. A marine railway for hauling out and repairing company's towboats and lighters is in contemplation for the near future.

Charleston-Telephone System.—The Sea Island Telephone Co. has been incorporated,

with capital stock of \$10,000, to construct telephone lines and system connecting Charleston and the several sea islands on the coast. The incorporators are F. W. Fowles of Madmalaw Island, H. Blich and W. C. Geraty of Young's Island, E. M. Seabrook of Edisto Island and C. Bissell Jenkins of Charleston. Address last-named party.

Charleston-Phosphate Mines.—The New Cut Mining Co., reported lately as incorporated, has opened phosphate mines, and is now putting in complete plant to facilitate operations; J. N. Alphonse, manager, 203 Ashley avenue.

Cheraw-Saw-mill, etc.—The Palmetto Lumber Co., reported lately as incorporated, will erect saw-mill for development of 20,000 acres of timber lands in Chesterfield county; logging road will be constructed and plant will be for both rough and dressed lumber. Omohundro & Digs will remove their plant from Sanford, N. C., to be absorbed by the new company; Ernest Williams, Lynchburg, Va., president.

Georgetown-Water-works.—A system of water-works, including construction of a dam, will be built. Address E. R. Simpson, Atlantic House.*

Greenville-Real Estate.—W. J. Thackston, I. I. Westervelt and F. W. Wilcox have incorporated the Paris Mountain Sulphur Springs Co., with capital of \$1000, to deal in real estate, etc.

Greenville-Printing Plant.—Incorporated: The Shannon Printing Co., capital stock \$10,000, by J. R. Shannon, B. M. Metcree and N. C. Poe, to conduct printing plant.

Jonesville-Excelsior Factory.—J. F. Alman & Bro. contemplate erecting an excelsior factory.*

Rock Hill-Supply Company.—The Rock Hill Supply Co. has been incorporated, with capital stock of \$20,000, by T. O. Flowers, president, and others.

Rock Hill-Live-stock Company.—Chartered: The Kerr Live-Stock & Livery Co., with capital stock of \$10,000, by R. L. Kerr and others.

Rosemary (not a postoffice) Knitting Mill.—The Rosemary Knitting Mills has been incorporated to establish a knitting mill, and also secures the right to mill rice and corn; capital stock \$20,000; incorporators, G. W. Green, Jr., and H. K. Anderson, both of Williston, S. C.

Spartanburg-Cold-storage Plant.—W. H. Clark may install cold-storage equipment for 18x25-foot apartment.*

TENNESSEE.

Chattanooga-Glass Factory.—A. B. Dabzell, Horace McClure and C. A. Hecht, glass manufacturers of Findlay, Ohio, are said to be interested in the proposed establishment of a glass factory at Chattanooga.

Chattanooga-Mining.—Chartered: The Hamilton Mining Co., to mine coal, iron, lead, zinc, etc., capital stock being \$5000. Geo. D. Lancaster, E. Watkins, W. G. M. Thomas, R. B. Cooke and Morris L. Hendrick are the incorporators.

Columbia-Soap Factory.—Emeret Caldwell is mentioned in connection with a contemplated soap factory.*

Johnson City-Wood-pulp Mill.—The Chestnut Manufacturing Co., Stewart Wilder, president, will install machinery for the manufacture of ground wood pulp. Other machines will be installed later for increasing capacity to sixteen tons per day.

Knoxville-Oar Factory.—William Fitzgibbons is investigating with a view of removing his oar factory from Saranac, Mich., to Knoxville.

Knoxville-Cotton Mill.—The Knoxville Woolen Mills will install 5000 additional spindles, increasing its total to 10,000. The new machinery will cost about \$75,000.

Memphis-Henry E. Goodlett and others have incorporated the Globe Talking Machine Co., with capital of \$500.

Memphis-Fiber Company.—The Union Fiber Co. has been incorporated by R. D. Raubart, W. W. James, Jr., Alston Boyd, J. M. Maudie and James H. Malone to manufacture cottonseed-hull bran and fiber and cottonseed products in general.

Nashville-Coal Mines and Coke Ovens.—A dispatch from Nashville states that at a meeting of the directors of the Cumberland Coal & Coke Co. in St. Louis, Mo., last week certain improvements were authorized on the line of the Tennessee Central Railway. Report says that James E. Rhodes, assistant to president, was authorized to open coal mines of 500 to 1000 tons capacity daily, and to contract with private parties for the opening of other mines of 750 tons daily capacity and the construction of coke ovens.

Pittsburg Iron Furnaces.—It is rumored that the Lafollette Land Co. contemplates

building iron furnaces at Pittsburg. H. M. Lafollette, Lafollette, Tenn., can give information.

Shelbyville-Dairy.—Chartered: The Locust Leaf Dairy Co., with capital stock of \$10,500, by H. Burt Smith, Henry B. Hauey and others.

TEXAS.

Arlington-Educational.—Chartered: The Arlington College, with capital stock of \$40,000, by A. J. Rogers and others.

Cameron-Mercantile.—Chartered: The Sanger-Joseph Company, with capital stock of \$20,000, by J. C. Joseph and others.

Carrollton-Gln.—Chartered: The Carrollton Cotton & Gin Co., with capital stock of \$9000, by James Cox, J. S. Meyers, G. T. Warner, H. F. Marsh and others.

Corsicana-Publishing.—The Sunlight Publishing Co. has been incorporated, with capital stock of \$20,000, by A. W. Hartman and others.

Dallas-Optical Company.—The J. M. Chappell Optical Co. has been incorporated, with capital stock of \$25,000, to manufacture optical goods, etc., by J. M. Chappell, J. E. Mitchell and T. V. Murray.

Dallas-Chartered: The Bailey Cattle Co., with capital stock of \$100,000, by John N. Simpson and others.

Home-Telephone Company.—The Home Telephone Co. has been incorporated, with capital stock of \$600, by W. L. Higginbotham, G. H. Baxter, J. H. Thompson and others.

Houston-Road Improvements, etc.—The city will hold an election on August 25 to consider the issuance of \$600,000 of road improvement, as lately reported, and bridge bonds; E. H. Vasmer, county judge.*

Houston-Cotton-tie Buckle Factory.—T. W. House, H. W. Garrow, D. M. Campbell and S. Taliaferro have incorporated the Campbell Cotton Tie & Buckle Co., with capital stock of \$150,000, to manufacture a cotton-tie buckle.

Mineola-Water-works.—H. M. Cate and J. F. Yarbrough have received franchise, lately mentioned, for the construction of water-works. It is the intention, however, to install only a limited system in the business portion of the town to reduce fire insurance rates.

Palestine-Coal Mines.—The Palestine Coal & Mining Co. will be incorporated, with capital stock of \$10,000, for developing coal properties; incorporators, C. J. Grainger, G. L. Noble, A. B. Hodges, G. W. Bordeaux and others.

Pittsburg-Sugar Refinery.—The establishment of a sugar refinery is contemplated. Address W. C. Hargroves.

Sabine-Grain Elevator.—Efforts are being made for the establishment of a grain elevator. For information address J. W. Brownlee.

Sherman-Cotton-oil Mill.—The Texas & Indian Territory Oil & Cotton Co. has been incorporated (principal office in Sherman), with capital stock of \$175,000, for establishment of three cottonseed-oil mills. The Sherman mill will be the Sherman Farmers and Feeders' Oil Mill purchased by the company, and the machinery has, it is said, been purchased for two Indian Territory mills.

Strawn-Coal Mines.—The Standard Coal Mining Co. has purchased 2000 acres of coal lands near Strawn for development.

Terrell-Construction, etc., Company.—The Interstate Engineering & Construction Co. has been incorporated, with capital stock of \$10,000, by M. A. Joy, J. G. Boyd and S. E. Noble.

Texas-Ginnery.—The Continental Gin Co. of Dover, Del., has been incorporated to transact business in Texas; capital stock is \$3,000,000; incorporators are S. I. Munger and J. E. Means of Dallas, Texas, and others.

Wharton-Syrup Mill.—C. H. Waterhouse will establish a syrup mill at Glen Flora; machinery all purchased.

VIRGINIA.

Abingdon-Water-works, etc.—Chartered: The Abingdon Water & Light Co., to operate water, gas and electric-light plants; capital stock \$25,000; incorporators, H. E. McWane of Lynchburg, C. W. Palmer of Saltville, R. M. Page, F. B. Hurt and J. I. Hurt of Abingdon.

Ballston-Mercantile.—Chartered: The American Provision Co., with capital stock of \$25,000, by W. N. Roach and others.

Bridgewater-Mercantile.—Chartered: Sipe & Arcey Co., with capital stock of \$50,000, by W. H. Sipe and others.

Bristol-Water-elevator Works.—The National Pneumatic Water Elevator Co. has been incorporated, with capital stock of

\$100,000, for the manufacture of a patented water elevator recently invented. J. H. Wood is president; H. E. Jones, vice-president-treasurer, and B. E. Harding, secretary and general manager.

Clifton Forge.—The Virginia Boom & Lumber Co. has been incorporated, with capital stock of \$5000, to operate saw-mills, construct lumber booms, etc.; W. R. Thompson, president; Geo. K. Anderson, vice-president, and Z. S. Vincent, secretary.

Culpeper.—Sewerage System.—The city will construct sewerage system. Address R. F. Borton, Sam Diener or David Bailey.

Danville.—Rug Factory.—William Pike of 1015 Arch street, Philadelphia, Pa., mentioned last week under Anniston, Ala., as contemplating a rug factory, writes regarding his proposed industry. Mr. Pike states that he represents a large Smyrna rug manufacturing company which is looking for a Southern location where labor is cheap, local capital can be interested and building ready for occupation. It is likely that the factory will be located in Danville, Va.

Falls Church.—Telephone System.—Chartered: The Falls Church Telephone & Telegraph Co., with capital stock of \$5000, by M. E. Church, B. E. Williams, E. J. Northrup and others.

Indian Rock.—Limekiln.—E. Dillon & Co. will rebuild their limekiln, reported burned at a loss of \$10,000.

Lynchburg.—Machine Shops.—The United Cigarette Machine Co., A. H. Burroughs, president, will remove its shops from Salem to Lynchburg, and will occupy building to be erected by the Rivermont Woman's College; building will be 52x132 feet and cost \$10,000, and W. B. Sneed & Co. have contract for erection. It was reported last week that the Bonsack Machine Co. of Salem would remove to Lynchburg. The United Company is a combination of the Bonsack with four or five other concerns.

Lynchburg.—Hardware Works.—The Lynchburg Lock Works has been chartered, with capital stock of \$17,500, and privilege of increase to \$50,000, and John P. Pettyjohn is president; William Hurt, vice-president; N. D. Eller, Walker Pettyjohn and H. E. McWane, directors. The company has purchased and will operate the plant of the Lynchburg Hardware Manufacturing Co.

Manchester.—Trunk and Bag Factory.—The Union Trunk & Bag Co., with capital stock of \$5000, has been chartered for manufacturing trunks, bags, etc., by C. S. Reams of Richmond, J. H. Busby, S. P. Jones, W. G. Reams and others, all of Manchester.

Newport News.—Electric-light Plant.—The Consumers' Light, Heat & Ice Co., reported last February as incorporated, has contracted with the George A. Williams Co., Jersey City, N. J., for erection of its proposed electric-light plant. Building will be of brick, with steel trusses and slate roof. Plant will cost about \$70,000. W. C. Stuart, president, may be addressed.

Norfolk.—Brick and Tile Works.—Chartered: The Appomattox Brick & Tile Co., with capital stock of \$10,000, and privilege of increase to \$50,000, for the manufacture of brick, tile, terra-cotta, etc.; John C. Gordon, president; R. H. Gregory, vice-president; D. J. Turner, secretary, and David E. Williams, treasurer.

Norfolk.—Jobbing House.—The Norfolk Jobbing House has been incorporated, with capital stock from \$5000 to \$25,000, by Bernard Miller (president) and others, to conduct general clothing and merchandise business.

Orange.—Hardware Company.—Chartered: The Orange Hardware Co., with capital stock of \$5000, by J. Y. Button and others.

Portsmouth.—Recording Company.—The Johnson Sound Recording Co. has been incorporated to deal in records of machinery, tools, etc., with capital stock of \$100,000, by G. C. Callahan, W. H. Triol, W. E. Stokes, H. M. Kurtz and others, all of Philadelphia, Pa.

Richmond.—Sewerage System.—Chartered: The Brookland House Drainage Co., to construct and maintain sewers, by T. F. Jeffress, J. C. Shafer, J. Bryan, R. P. Kerr, G. L. Christian and others; capital stock \$25,000.

Richmond.—Chemical Works.—The Planters' Chemical Co. has been incorporated for manufacturing chemicals, etc., by R. Gilham, D. G. Whitehead, T. H. Brown and others; capital stock \$100,000.

Richmond.—Electrical Machine.—The Avon Electrical Co. of America is being organized, with capital stock of \$500,000, to control the patents in this country of the Avon electrical meter for measuring electricity. Among those interested are Andrew Pizzini and J. Alph Pizzini, both of Richmond.

Richmond.—Coffin and Casket Factory.—Hunter & Sims have purchased large build-

ing for their coffin and casket factory, and will remodel it.

Roanoke.—Supply Company.—Chartered: The Big Lick Supply Co., with capital stock of \$5000, by J. E. Brown and others.

Scottsville.—Mining.—Chartered: The Virginia Mining Co., by J. V. Pereira, J. S. Davis of Scottsville, R. B. Dameron and others of Lynchburg. The capital stock is \$25,000.

Strasburg.—Cement Deposits.—It is said that Warner Moore of Richmond has secured a tract of land near Strasburg with a view to manufacturing Portland cement.

Windsor Station.—Peanut Factory.—It is said that John H. Holland, L. M. Roberts and John Ashburn and others will establish a peanut factory.

WEST VIRGINIA.

Benwood.—Ferry.—The Benwood-Bellaire Ferry Co., capital stock \$100,000, has been incorporated by Charles Schad and others.

Charleston.—Woodworking Factory.—The Kanawha Woodturning Co. will rebuild its factory, recently destroyed by fire and explosion. All the required machinery has been purchased.

Charleston.—Coal Mines.—The Mile Branch Coal Co. has been incorporated, with capital stock of \$50,000, to develop coal lands. The incorporators are J. Q. Dickinson, John L. Dickinson, R. G. Quarrier and Malcolm Jackson of Charleston, and J. B. Lewis of Handley, W. Va.

Charlestown.—Lead and Zinc Mines.—I. S. Smith in developing manganese ore has discovered lead and zinc deposits, and a company will be organized for extensive developments.

Clarksburg.—Oil Wells.—The Washington Oil & Development Co. has been incorporated, with authorized capital of \$200,000, by Samuel S. Yoder, Thomas E. Keating of Washington, J. M. Kelly, John W. Davis and others of Clarksburg.

Clarksburg.—Chemical Factory.—It is reported that the Wuth Chemical Co. has been organized by James B. Graham of Pittsburgh, Pa., and others for the manufacture of chemicals used in glass manufacturing; authorized capital \$1,000,000.

Davy.—Mining.—The Twin Branch Mining Co. has been incorporated, with capital stock of \$120,000, by F. M. Petus, D. H. Johnston, Wyndham Stokes, Albert Watts and others.

Davy (D. O. at Hallsville).—Coal Mines.—The Davy Coal Co. has been chartered, with authorized capital of \$100,000, by J. F. Mitchell, W. G. Morgan of Hallsville and S. S. Coffey and F. M. Peters of Bluefield, to open coal mines.

Fairmont.—Coal Mines.—A. B. Fleming, C. W. Watson, Walton Miller, S. L. Watson and W. S. Black have incorporated the Chicago Coal Co., with authorized capital of \$100,000, to open coal mines.

Friendly.—Milling.—The Taylor County Milling Co. has been incorporated, with authorized capital of \$15,000, by Thomas Moore, A. T. Smith, W. F. Smith and others.

Huntington.—Lumber Mill.—The C. L. Ritter Lumber Co. will rebuild its mill, reported burned at Ritter's Sliding.

Philippi.—Coal Mines.—The Freeport Smokeless Coal & Coke Co. has been chartered, with capital stock of \$500,000, by Frank B. Sloan, George B. Wade and George B. Clifton of Baltimore, Md.; Columbus Kelly of Philippi and others.

Romney.—Telephone System.—The Romney & Cumberland Telephone Co. has been incorporated for constructing a telephone system from Romney to Cumberland, Md.; also from Frankfort to Cumberland; incorporators, J. H. C. Pancake, Wm. S. Guthrie and G. N. Nutter of Romney, R. M. Washington of Springfield and others; authorized capital \$5000.

Sistersville.—Plumbers' Supply Works.—It is reported that the Plumbers' Supply Co. of Pittsburgh, Pa., through its agent, J. H. Hardebeck of Kankakee, Ind., will locate a \$175,000 plant in Sistersville; buildings to be of brick and stone and cost \$40,000. A. B. Hunt, C. A. Krug and J. H. McCoy have been appointed a committee to complete arrangements for locating the plant.

St. Mary's.—Oil Wells.—The Liberty Oil & Development Co. has been incorporated by William B. Hewitt and others of Pittsburgh, Pa.; authorized capital \$500,000.

Weston.—Oil and Gas Lands.—The Keeners Oil, Natural Gas & Fuel Co. has been incorporated by W. W. Keener, J. F. Keener, G. P. Keener of Morgantown and others; authorized capital \$1,000,000.

Wheeling.—Tobacco Factory.—The Ohio Valley Tobacco Co. has been organized, with

Andrew S. Hare, president; W. C. Meyer, secretary and treasurer, and Frank Bachman, manager; company has leased building and equipped it for the manufacture of scrap tobacco.

Wheeling.—Picture-frame Factory.—The Hood Manufacturing Co. has been incorporated to manufacture picture frames, moldings, etc., its capital stock being \$50,000; incorporators, C. W. Arnett, J. A. Jamison, C. C. Wheeler and G. M. Alexander of Fairmont; Hugh Hood of Little Falls, W. Va., and Harry Clayton of Mountain Lake Park, Maryland.

BURNED.

Abbeville, Ga.—W. W. Deming's saw-mill; loss \$3000.

Hammond, La.—June Bros.' drykln.

New Orleans, La.—Aurora Ice Co.'s factory; estimated loss \$45,000.

Richwood, Ga.—Parrott Lumber Co.'s mill; estimated loss \$25,000.

Rockford, Tenn.—James Harris' flour and grist mill washed away by floods; loss \$10,000.

BUILDING NOTES.

Alexandria, Va.—Dwellings.—Julius Wenig of Washington, D. C., has made plans for four brick and stone dwellings for the Alexandria Building Fund Association.

Ashland, Ky.—Bank Building.—Judge W. H. Houston will erect a bank and stores building.

Baltimore, Md.—Apartment Stables.—The company reported recently to be organized for the erection of apartment stables has been incorporated as the Roland Park Apartment Stables Co., by Edward H. Bouton, George W. Truitt, John McKenzie and others; capital stock \$40,000. Address E. H. Bouton, Roland Park.

Baltimore, Md.—Asylum Addition.—John T. Buckley, builder, will obtain permit for erection of \$6000 addition to St. Frances Orphan Asylum.

Baltimore, Md.—Factory Building.—Edw. A. Griffith has permit to erect a factory building 50x75 feet and 49 feet, to cost \$6000.

Baltimore, Md.—Dwellings.—Hodges & Leach, office in Wilson Building, are preparing plans for \$7000 cottage for Otis Tall, building to have hot-water heating system.

Birmingham, Ala.—Hotel.—D. H. Burnham & Co. of Chicago have been selected to prepare plans and specifications for the proposed Hillman Hotel to cost \$200,000, lately mentioned. The Hotel Hillman Co., T. H. Molton, president, will own the building.

Birmingham, Ala.—Dwellings.—The Bessemer Land & Improvement Co. is asking for bids on the erection of forty-three operatives' dwellings.

Birmingham, Ala.—Stables.—The R. M. Newbold Co. has contract for building \$6000 addition to the Fies & Son livery stables.

Chattanooga, Tenn.—Dwelling.—J. C. Estes awarded contract to R. W. Andrews to erect a two-story pressed brick, stone trimmed and slate roof dwelling to cost \$5000.

Chattanooga, Tenn.—Hotel.—Col. F. A. Lincoln proposes to enlarge and improve the Southern Hotel, installing an electric plant and other modern facilities.

Cleburne, Texas.—Opera-house.—John C. Brown & Son are building the opera-house lately mentioned.

Columbus, Ga.—Stores Building.—J. H. McClellan & Co. of Blountsville, Fla., will erect a two-story brick stores building, as recently reported; will be 24x80 feet and contain ten rooms; cost \$6000.

Cumberland, Md.—Church.—William A. Cornwell has received contract for building Catholic church in South Cumberland; building will be of stone and brick, with slate roof, 42x73 feet; estimated cost \$7000.

Dallas, Texas.—Library.—M. R. Sanguinet of Fort Worth has prepared plans for the Carnegie Library at Dallas. Address Joseph M. Dickson of the Public Library Association.

Fort Valley, Ga.—Warehouse.—The Harris Trading Co. will build warehouse 100x300 feet.

Fort Worth, Texas.—Clubhouse.—The erection of a clubhouse to cost \$12,500 is proposed by F. D. Thompson and others.

Greensboro, N. C.—Grandstand.—The Central Carolina Fair Association has asked for bids on the erection of a grandstand to seat 1500 people and a two-story building 60x150 feet.

Greensboro, N. C.—Store Building.—John W. King will receive sealed bids for twenty days for erecting three brick stores accord-

ing to plans and specifications, which may be seen at King Bros.' store. Usual rights reserved.

Hartwell, Ga.—Bank Building.—The Hartwell Bank will erect new building.

Huntsville, Ala.—Dwellings.—T. C. Dupont, president of the Huntsville Street Railway, has completed plans for erection of 300 dwellings in Huntsville. Mr. Dupont's address is Johnstown, Pa.

Huntsville, Ala.—Warehouse, etc.—The Dullas Manufacturing Co. will contract next week for erection of 150 cottages and a warehouse of fireproof construction.

Johnson City, Tenn.—Stables.—Jas. A. Martin is having plans made by C. G. Mitchell for erection of a two-story livery stable 70x100 feet.

Knoxville, Tenn.—Theater.—Fritz Staub proposes the expenditure of \$25,000 for the erection of a theater or for enlarging and improving structure.

Marion, Va.—Jail.—Supervisors of Smyth county awarded contract to the B. F. Smith Fireproof Construction Co. of Washington, D. C., for the building of a new jail and the rehabilitation of the old jail for \$6000 on plans furnished by B. F. Smith.

McKenzie, Tenn.—Stores.—J. D. McKenzie and J. A. McKenzie will build three brick stores. Marshall & Hamilton will build a brick store two stories high, 24x72 feet.

Montgomery, Ala.—Warehouse and Office Building.—J. C. Haas has had plans made by Lockwood & Smith for erection of a two-story brick, stone and terra-cotta office and warehouse building to cost \$20,000. F. P. Helfner of Atlanta, Ga., has contract.

Natchez, Miss.—School.—The city has accepted plans drawn by J. W. Gaddis of Vincennes, Ind., for its proposed \$25,000 school building. Bids on erection will be asked for immediately. Address "The Mayor."

Newberry, S. C.—Church.—The Thompson Street A. R. Presbyterian Church will erect a \$10,000 structure. Address "The Pastor."

Norfolk, Va.—Depot and Office Building.—The Norfolk & Atlantic Terminal Co. has recently purchased a \$60,000 depot site, and will construct depot and office building (lately reported). Plans and specifications have not been prepared; S. D. Mathes, general superintendent.

Pensacola, Fla.—Cottages.—The Pensacola Electric & Terminal Railway Co., W. H. Northrup, president, will erect a number of cottages.

Pine Bluff, Ark.—School Building.—The city awarded contract to W. B. Hilton to erect a two-story brick school building to cost \$6000.

Richmond, Va.—Hotel.—Col. John Murphy will erect an annex to his hotel; structure will be six stories high, 45x136 feet and 22x136 feet; site for annex cost \$35,000.

Savannah, Ga.—Engine-house.—The city is having plans and specifications prepared for new engine-house; building to cost \$3000 and equipment \$1000. Address "The Mayor."

Sumter, S. C.—Natorium.—Chartered: The Sumter Natatorium Co., J. E. Harby, president; A. B. Stickey, secretary and treasurer; capital \$500.

Thomas, W. Va.—The Buxton & Landstreet Co. has let contract to W. A. Liller of Keyser, W. Va., for erection of 80x120-foot \$30,000 building lately mentioned.

Washington, D. C.—Whitehouse.—Walter A. Owens has prepared plans for enlarging the Executive Mansion. His plans contemplate the erection of two large wings.

Washington, D. C.—Apartment-house.—Julius Wenig has prepared plans for a four-story and cellar apartment-house for H. F. Mooney, to be 20x72 feet and contain baths, hot-water heat, ranges, etc.; same architect has planned four six-room dwellings for M. B. Harlow, to be of red brick and limestone.

RAILROAD CONSTRUCTION.

Railways.

Barboursville, Ky.—It is stated that a Baltimore syndicate is considering the purchase of a tract of coal land near Barboursville, and will build a railroad about five miles long to connect it with the Louisville & Nashville system. Messrs. Riddell & Sprout of Barboursville are reported as interested.

Bel Air, Md.—It is stated that surveys are now being made in the interest of the proposed railroad between Bel Air and Havre de Grace, a distance of fifteen miles. This line is being promoted by a company of which John H. Reckord is president.

Biloxi, Miss.—W. L. Covell, general manager of the Gulf Coast Railroad, writes the Manufacturers' Record that this line will be

about thirty-two miles in length, extending from Biloxi to Pass Christian, with one or two branches. It will be a trolley system, and, according to Mr. Covel, work is to begin in the near future.

Cumberland, Md.—It is reported that the Baltimore & Ohio Railroad Co. is considering the plan of utilizing electricity as a motive power for hauling freight trains upon the section of its line between Cumberland and Grafton, W. Va., a distance of about ninety miles. J. M. Graham at Baltimore is chief engineer of the company.

Denison, Texas.—Work has begun upon the extension of the St. Louis & San Francisco Railroad from the Red river north into Indian Territory. Messrs. Johnson Bros. & Faught at Sapulpa, I. T., are general contractors for the extension.

Donaldsonville, La.—J. T. Muhl, engineer of the Southern Pacific Railway Co., advises the Manufacturers' Record that no decision has been reached about the extension of its line to Donaldsonville.

Dublin, Texas.—It is stated that the Texas Central Railroad Co. has finally decided to build its extension from Dublin to Thurber. This route was recently surveyed, and is thirty-five miles long. Charles Hamilton at Waco is president of the company.

Fort Valley, Ga.—It is reported that the Waycross Air Line Railroad Co. may build a branch of this road to Fort Valley and Perry, Ga. J. E. Wadley at Waycross is president of the company.

Greenville, S. C.—It is reported that the plan to build a railroad from a connection with the Seaboard Air Line to Greenville has been revived, and that negotiations are now under way to carry out the enterprise. The estimated distance is about fifty miles, and the road, if built, would reach Piedmont, Peizer and other manufacturing towns.

Gulfport, Miss.—It is reported that the Gulf & Ship Island Railroad Co. has decided to build several branches in addition to those now under construction, one of which will be along the Pearl river. S. S. Bullis at Gulfport may be addressed.

Gurdon, Ark.—William Grayson of St. Louis, president of the Gurdon & Fort Smith Railroad Co., writes the Manufacturers' Record that bids are now being received for building the first thirty-five miles of this line. The company will be in the market later on for rails and rolling stock. Mr. Grayson may be addressed at Walnwright Building, St. Louis.

Hanceville, Ala.—The Louisville & Nashville Railroad Co. has let a contract to O. D. Hutton & Co. of Birmingham for the proposed line between Hanceville and mines of the Stout Mountain Coal Co. The road will be about eight miles long.

Hartwell, Ga.—The business men of Hartwell are agitating a railroad line from this town to either the Southern system or the Seaboard Air Line. D. C. Alford is one of the parties interested.

Huttonsville, W. Va.—The Alton & Huttonsville Railroad Co. has been incorporated to build a line from Huttonsville to Bean's Mills, in Upshur county. The company is capitalized at \$500,000, and includes John D. Coffin and E. G. Wilson of Buckhannon, W. Va. It is understood that the road will be a feeder of the West Virginia Central & Pittsburg.

Irvine, Ky.—It is reported that the work of constructing the extension of the Louisville & Atlantic Railroad between Irvine and Beattyville has begun, and that about eighteen miles have been graded. The estimated distance is thirty-five miles. It is intended to complete the line to a connection with the Norfolk & Western, a total distance of ninety miles from Irvine. J. H. Pearson is chief engineer.

Jacksonville, Fla.—The city council has given a franchise to the Jacksonville Street Railroad Co. to extend its trolley system along several streets in the city.

Lafollette, Tenn.—It is reported that the Tennessee Northern Railroad Co. has practically decided to build the proposed extension to Middlesboro, Ky. The distance is estimated at twenty-five miles. H. M. Lafollette at Lafollette is general manager.

Little Rock, Ark.—It is stated that the Little Rock & Northern Railroad Co. is making surveys between Little Rock and Springfield, Mo., a distance of 170 miles.

Lufkin, Texas.—The Texas & Louisiana Railroad Co. has been chartered to build a line from Lufkin to Windham. The company is capitalized at \$200,000, and includes E. W. Frost and T. L. Temple of Texarkana, Arkansas.

Mayo, Fla.—About fifteen miles of extension of the Suwannee & San Pedro Railroad

have been graded, and tracklaying has begun. This line is to be completed from Live Oak, Fla., to Stevensville and Perry, a total distance of about 105 miles. Frank Drew of the Drew Lumber Co. at Mayo is general manager.

Monterey, Tenn.—It is reported that arrangements have practically been completed for the extension of the Nashville & Knoxville Railroad along Laurel Creek valley, and that construction work is to begin immediately. A. J. Crawford is president of the company. The offices of the company are at Cookeville, Tenn.

Norfolk, Va.—The latest report concerning the Norfolk, Pig Point & Newport News Railway is to the effect that work will begin upon it within the next month.

Pensacola, Fla.—It is stated that the Pensacola Terminal Company has under consideration improvements to what is known as the dummy line, by which electric motors will be used on a considerable mileage. W. H. Northrup is president of the company.

San Antonio, Texas.—It is stated that the Missouri, Kansas & Texas Railroad Co. has finally decided to begin the construction of the proposed branch from San Marcos to San Antonio, fifty miles, and that work will probably begin within the next four weeks. A. A. Allen at Dallas, Texas, is vice-president.

Savannah, Ga.—The company which proposes building a railroad in connection with the union depot has applied for a charter under the title of the Savannah Union Station Co. The railroad to be built will consist of two branches, and will aggregate eight miles in length. Cecil Gabbett and William W. Mackall at Savannah are among those interested.

Selma, Ala.—It is reported that work has begun upon the extension of the Birmingham, Selma & New Orleans Railroad between Martin's and Linden. F. M. Abbott at Selma is president of the company.

Selma, Ala.—It is stated that surveys are nearly completed for the proposed extension of the Birmingham, Selma & New Orleans Railroad from its present terminus to Thomasville, a distance of fifteen miles. F. M. Abbott at Selma is president of the company.

Selma, N. C.—The work of grading the Great Eastern Railroad has begun at Fremont. This road is being promoted between Selma and Greenville by way of Snow Hill. J. W. Lynch is president of the company. J. H. McCleary of Suffolk, Va., is one of the principal promoters.

Texarkana, Texas.—W. M. Buchanan, president of the Louisiana & Arkansas Railroad Co., advises the Manufacturers' Record that it is expected to extend the road in the near future, but the plans have not fully matured as yet.

Water Valley, Miss.—A meeting will be held at Water Valley on August 1 and 2 in the interest of the proposed railroad between Water Valley and a point on Mississippi river. W. C. Bryant is one of the principal promoters of the enterprise.

Wheeling, W. Va.—John Arbenz and William Ebert are interested in the proposed electric railroad between Wheeling and Wellsburg, a distance of fifteen miles. It is stated that the road is to be completed within the next eighteen months if a franchise is secured.

Street Railways.

Berkley, Va.—The Berkley Street Railway Co. has begun the work of building the extension to Gilmerton, in the suburbs, a total distance of about four miles.

Biloxi, Miss.—It is stated that W. L. Covel of Biloxi is making surveys for the proposed electric line in the town and suburbs.

El Paso, Texas.—It is stated that a Chicago syndicate has made arrangements to rebuild the street railroad line in El Paso, also Juarez, Mexico, for the use of trolley motors, and that work is to commence immediately.

Portsmouth, Va.—The sale of the Portsmouth Street Railway Co. to a syndicate which includes R. Lancaster Williams and others has been confirmed. It is stated that a number of improvements will be made to the property and several extensions built.

Selma, Ala.—F. M. Abbott has purchased the Selma City & Suburban Railroad, and it is understood will rebuild the line for the use of electric motors.

St. Louis, Mo.—A bill has been introduced in the city house of delegates for a street railway to be controlled by the city. It is to be four miles long if built. The mayor may be addressed.

Valdosta, Ga.—The work of constructing the Valdosta Street Railway has been begun by the Creaghead Engineering Co. of Cincinnati, Ohio. The line will be about five miles in length. T. G. Cranford at Valdosta is president of the railroad company.

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Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Agricultural Implements.—See "Compress."

Bakery Machinery.—R. H. Lee, care of International Phosphate Co., Mt. Pleasant, Tenn., wants to correspond with manufacturers of bakery machinery.

Boiler and Engine.—See "Drilling Machinery."

Boilers.—C. C. Smoot & Sons Co., Alexandria, Va., will be in the market for two 150-horse-power boilers.

Boilers and Engine.—See "Steam Plant."

Boilers and Engine.—W. M. Plummer, 412 Seventh street S. E., Washington, D. C., wants second-hand 15-horse-power upright boiler, all fixtures complete; 10-horse-power upright boiler, all fixtures complete, and a 10-horse-power engine, with all fixtures complete.

Boilers and Engines.—See "Brick Machinery."

Boilers, Engines, etc.—Elliott Woods, acting architect, United States Capitol, Washington, D. C., will receive proposals until August 11 for furnishing and putting in place on foundation to be erected by the government one forged-steel water-tube boiler of 250 horse-power, of high-pressure type, and for 187½-kilowatt Westinghouse generators, direct connected to suitable Westinghouse compound engines, with marble power panel, connection, instruments, etc., all to be similar in character and type to those now in use, and to operate in conjunction with the present plant. Usual rights reserved.

Brick Machinery.—W. H. Schank, Brevard, N. C., wants prices on brick machinery; also engines and boilers.

Bricks.—See "Building Materials."

Bridge.—T. D. Moncreux, county commissioner, Aylett, Va., will open bids August 15 for the construction of a bridge to be built on piles, to have 40-foot draw in the clear. Plans for both wood and steel structure are invited. White oak piles eight inches at small end, white oak flooring two inches thick, framing of heart pine or white oak. Usual rights reserved.

Bridge.—Buckingham county, Virginia, asks bids until August 23 for the construction of a six-panel steel bridge, one span ninety-six feet long between centers of end pier, roadway twelve feet wide in clear, joists to be good quality white oak. Judge John R. Moss will open the bids. Information and specifications from William Pelle, road engineer, Buckingham, Va.

Broom-factory Supplies.—B. M. Wood, Washington, Ga., wants prices on broom corn, tin foil, copper wire and twine used in manufacture of brooms.

Building Materials.—Wm. W. Bierce, Ltd., 1106 Hennen Building, New Orleans, La., wants prices on the following material f. o. b. cars at works, but not for delivery: One to one and one-half miles of six-inch water pipe, twelve fire hydrants of regulation size for the piping, one carload of pitch, one carload No. 14 tarred paper (felt), one carload gravel that will pass through three-quarters inch mesh, 100,000 bricks, 2000 fire-bricks, 200,000 feet of lumber, square-edged and round, 100 barrels of lime and five barrels of fire-clay.

Canning Machinery.—Quarles & Hill, Fosters, Ala., want to correspond with manufacturers of canning machinery.

Carpet Machinery.—A. D. Martin, Lafayette, La., wants to correspond with makers of carpet machinery.

Coffin Machinery.—See "Woodworking Machinery."

Cold-storage Plant.—Blalock & Neale, Richmond, Va., want prices on cold-storage plant.

Compress.—J. D. Smith, Carrollton, Ga., will want to buy a hay press and other agricultural implements.

Conveying Machinery.—See "Rice-mill Machinery."

Cotton-mill Machinery.—Mary Louise Mill, Cowpens, S. C., wants to purchase second-hand twisters for coarse yarns.

Drawing Press.—See "Machine Tools."

Drilling Machinery.—John J. Rea, Sistersville, W. Va., wants prices on well-drilling machine.

Drilling Machinery.—W. B. Johnson, Palestine, Texas, wants to buy complete equipment for drilling for oil, gas and coal to depth of 3000 feet if necessary; wants traction boiler of forty to fifty horse-power and reversible drilling engine and rotary attachments.

Dummy Engine.—See "Steam Shovel."

Dump Cars.—See "Steam Shovel."

Electric-light Plant.—See "Water-works."

Electric-light Plant.—Bids will be received in about thirty days for erecting municipal electric-light plant at Dothan, Ala., to operate twenty-five 1200-candle-power arc and 1000 16-candle-power incandescent lights; appropriation \$10,000. Address "The Mayor."

Elevator.—W. H. Clark, Spartanburg, S. C., will want an elevator for warehouse.

Excelsior Machinery.—J. F. Alman & Bro., Jonesville, S. C., want to correspond with makers of excelsior machinery.

Exhaust System.—See "Woodworking-factory Equipment."

Furniture Machinery.—See "Woodworking Machinery."

Ice Machinery.—W. H. Clark, Spartanburg, S. C., may buy machinery for cold-storage equipment in 18x25-foot apartment.

Knitting Machinery.—T. J. Arline, Wrightsville, Ga., wants prices on machinery for knitting ladies' underwear and hosiery.

Laundry Machinery.—B. L. Susman, Washington, N. C., wants to purchase laundry machinery.

Machine Tools.—W. J. Clark Co., Salem, Ohio, wants a large and a medium size second-hand drawing press.

Mining Equipment.—James D. West, Port Deposit, Md., wants to buy gold and silver mining and milling machinery.

Mixers.—John J. Rea, Sistersville, W. Va., needs a concrete mixer, gravity or power machine.

Piping.—See "Building Materials."

Piping.—Henry Stevens' Sons Co., Macon, Ga., is in the market for steam pipe with sleeve couplings, lap weld, as follows: Six hundred feet one-and-one-half-inch pipe, 100 feet two-inch, 200 feet three-inch and 75 feet four-inch pipe. Company wants prices, with freight rates to Macon.

Railway Equipment.—W. Grayson, president, 612 Walnwright Building, St. Louis, Mo., will be in the market for rails and rolling stock.

Railway Equipment.—Louisville & Atlantic Railroad Co., J. H. Pearson, chief engineer, Irvine, Ky., wants 6200 feet and probably six miles 60-pound relay rails.

Railway Equipment.—The Berkley Street Railway Co., Wm. Tillotson, secretary and treasurer, Berkley, Va., will soon be in the market for cars.

Rice-mill Machinery.—Savannah Rice Mill Co., John Screven, Jr., manager, 216 West Bay street, Savannah, Ga., will require some elevating and conveying machinery and a mangle leg.

Road Machinery.—E. H. Vasmer, county judge, Houston, Texas, wants to correspond with manufacturers of road-building machinery and appliances.

Sewerage.—Sealed proposals will be received until August 11 at depot quartermaster's office, 807 Equitable Building, Baltimore, Md., for installation of sewerage system at Fort Howard, Md. Necessary blanks and all information on application at office.

Sewerage System.—Sealed proposals will be received at the mayor's office, Culpeper, Va., until August 14 for constructing sewerage system for a part of the town, in accordance with plans and specifications to be furnished by the committee, R. F. Borton, Sam Diener, David Bailey. Usual rights reserved.

Sewers.—The date of opening bids for construction of nine miles of sewerage, lately reported, has been extended from July 10 to August 1; F. H. Welch, mayor; Ira W. Sylvester, city engineer.

Smokestack.—S. P. Peck, Hinton, W. Va., wants prices on new or second-hand smokestack forty-two inches diameter, fifty or seventy-five feet tall.

Soap Factory.—Emmet Caldwell, Colum-

bia, Tenn., wants estimate on cost of soap-making equipment, including engine, press and stamping machine.

Steam Plant.—F. M. Welch, mayor, Alexandria, La., will receive bids until August 1 for the following material f. o. b. cars Alexandria: High-speed automatic engine, two boilers, feed-water heater, separator and air lift. For specifications address J. C. Allen, superintendent E. L. & W. W.

Steam Shovel.—Angus M. Smith, Box 136, Raleigh, N. C., wants to rent, with privilege of buying, a steam shovel with capacity of 500 to 700 cubic yards per day, and a dummy engine and thirty-five two-yard side-dump cars.

Textile Machinery.—See "Carpet Machinery."

Tubing, etc.—Bell Oil Co., C. W. Metcalf, president, Pineville, Ky., will need casing and tubing for oil wells.

Water-works.—E. R. Simpson, Atlantic House, Georgetown, Ky., wants addresses of firms that will construct a system of water-works, including dam, for town of 6000 inhabitants.

Water-works, etc.—A. J. Cammack, mayor, New Iberia, La., will open bids August 9 for furnishing all material and labor to build and complete water-works system, consisting of nine miles of water pipe, three water-tube boilers, pumps, pump-house, two eight-inch artesian wells, two reservoirs, etc., and electric-light plant consisting of one 55-horse-power and two 120-horse-power engines, nine miles of wiring, moving of two generators, furnishing switchboards, two 75-kilowatt generators, etc.; certified check for 10 per cent. of the entire bid required; plans and specifications on file in office of city clerk, also at office of engineer, T. W. Nicoll, Mobile, Ala.

Well-drilling.—See "Drilling Machinery."

Woodenware Machinery.—See "Woodworking Machinery."

Woodworking Machinery.—H. G. Duke & Co., Oxford, N. C., are in the market for second-hand surface planer and band saw.

Woodworking Machinery.—N. P. Hecker, Box 296, New Iberia, La., wants prices on equipment for manufacturing buckets, tubs and other woodenware.

Woodworking Machinery.—Bessemer Furniture Manufacturing Co., Bessemer, Ala., E. B. Canoles, principal, will need machinery for manufacturing coffins and furniture.

Woodworking-factory Equipment.—Kana-wha Woodturning Co., Charleston, W. Va., will be in the market for a shaving exhaust system.

Woodworking Machinery.—P. W. Davis, Garland, Ala., wants lathes for turning handles.

TRADE NOTES.

Hardwood Lands.—Lumbermen frequently are seeking hardwood lands for development. The attention of such is called to tracts of about 3700 acres, which Messrs. Hopkins Bros. of Waco, Texas, want to sell. White oak, ash and hickory are on the property in large quantities.

Manganese Mines Sale.—A sale of Virginia manganese mines and equipment for development will be held on August 30. This property includes 250 acres, buildings, machinery, water-power and other facilities. John Stewart Walker & Co. of Lynchburg, Va., or J. H. Bartlett of Mt. Athos, Va., can give further particulars to interested parties.

Davis Coal & Coke Co.—Leonard A. Hickley has been appointed manager of the Philadelphia business of the Davis (W. Va.) Coal & Coke Co., succeeding F. B. Lott, who resigns. Mr. Hickley has been connected with the company for some years, and is well equipped to extend patrons of the company prompt, courteous and efficient treatment. The Philadelphia offices are in Room 905, Land Title Building, Philadelphia, Pa.

Rivets and Pump Chain.—The Garland Chain Co. of Rankin Station, Pa., has purchased the entire interests of the American Steel & Wire Co. in the manufacture of rivets and galvanized pump chain, particularly the departments of the H. P. Mill at Cleveland, Ohio, and the Washburn & Moen Manufacturing Co. at Worcester, Mass. The Garland Chain Co. is therefore prepared to supply promptly in any quantities the supplies mentioned.

Crucible Steel.—The Crucible Steel Co. of America has been incorporated under New Jersey laws and organized with William G. Park, chairman; C. H. Halcomb, president and general manager; Frank B. Smith, secretary, and Reuben Miller, treasurer. The capital stock is \$50,000,000. The company's

main office is in Pittsburg, Pa. It is expected that the new organization will increase largely the foreign export trade in crucible steel, etc.

Protect Your Blow-Off.—As the blow-off is the only connection to a boiler that cannot be examined except when the boiler is out of service, surely every precaution should be taken to keep it in order. Out-of-order blow-off pipes frequently cause damaging explosions. The blow-off can be protected by the use of the "Mather Blow-off Pipe Protector," a device now being introduced by Edmund Mather of Harrisburg, Pa. The device is a cast-iron removable sleeve; it can be promptly removed at any time when the boiler is out of service; it will have long life, even if it is in such an exposed position as to the heated gas. Send for particulars.

Economy of Power.—In equipping a manufacturing plant in these days of sharp competition economy of power is of prime importance. Much depends upon the quality of shafting used in driving the machinery. Cold-rolled shafting has been largely used, but it is said to have its drawbacks. Turned shafting is said to be better in some respects, yet it is difficult to produce it perfectly satisfactory. It is claimed that the shafting that is vastly superior to the cold-rolled or the turned is that which is first turned and then ground to size. For bids on this shafting, as well as on hangers and pulleys, buyers are invited to send specifications to E. H. Monteith, manufacturers' agent, 511 Chamber of Commerce Building, Cincinnati, Ohio.

Cold-Water Paint.—We wonder how many of our readers there are who have never heard of or seen "Magnite" cold-water paint. This article is being so extensively used and advertised through the South it would seem as if everyone must have heard of it. The manufacturers have a very large sale, owing to the paint's economy, durability, fire-resisting power and beauty of effect. Many large mills in the South, as well as public buildings and private residences, have been painted inside with this material. There is also an outside grade which stands the weather admirably at less than a quarter of the expense of oil paint. Messrs. J. A. & W. Bird & Co., Boston, Mass., manufacture "Magnite," and will furnish to inquirers full particulars concerning this cold-water paint.

Walker & Elliott.—Messrs. Walker & Elliott, machinists of Wilmington, Del., have been busily engaged recently in filling many orders. Some orders of importance recently filled by the firm were for shipment to Italy and to Venezuela, while another order will be ready in August for forwarding to the Hawaiian Islands. Inquiries from Russia-Poland are also coming to the firm. Messrs. Walker & Elliott's machinery is well known. Their improved plaster and rock crusher is a new machine introduced lately, embodying all the features of the firm's former crusher, so long and favorably known to the trade. New and valuable improvements suggested by years of experience are found in this improved crusher. Operators crushing any kind of material are invited to investigate Walker & Elliott machinery.

Helmet Oil Goes Everywhere.—Messrs. Charles H. Besly & Co., 10 and 12 North Canal street, Chicago, report that their general business is still very good. They are receiving many orders for Helmet oil, and are now making shipments to Colorado, Dakota, Montana, California and other Western points. They have just received orders for two complete shop equipments to go to India, including lathes, chucks, drills, screw plates, Gardner die stocks, Helmet oil, etc. The firm is receiving many orders for Gardner grinders, and recently made shipments to Ohio, Pennsylvania, New Jersey and New York. Aside from the many orders being received for their own specialties, Messrs. Besly & Co. note a good demand for general machinists' supplies. Their stock being so varied and each department being so complete, they are enabled to make prompt shipment of any of the material shown in their catalogue, copy of which is sent free to any address upon application.

For Cottonseed Crushers.—It is predicted that the ensuing cottonseed-crushing season will be one of sharp competition between the large mills and the small independent mills. The larger mills employ a mechanical engineer, who is constantly visiting the different plants and examining them with a view to improvements in efficiency and in economy of operation. It will be well for the smaller mills to take heed of this action and have a competent engineer to overlook their machinery equipments. Mr. J. H.

Crutchfield of Atlanta, Ga. (P. O. Box 120), claims to be such an engineer. Acting as mechanical engineer and machinist, and having a thorough knowledge of all cottonseed-oil machinery built, Mr. Crutchfield is able to give valuable advice to millers in the way of betterments of their plants and the improvement of their operations in the direction of economy. Manufacturers of cottonseed oil are advised to address Mr. Crutchfield relative to his terms for examining and making improvements to a mill.

Southern-Made Saws.—The South supplies many kinds of machinery used in the multitude of industries in operation within its borders. The development of timber lands by the erection of saw mills has encouraged the manufacture of machinery used in such mills. The production of saws requires the highest skilled workmen and the very best obtainable metal for reaching that perfection necessary to afford satisfaction to users. The Southern Saw Works of Atlanta, Ga., has been manufacturing circular saws and machine knives for mills for some years, and its product has met with a popularity that is constantly growing. Saws from this establishment have a wide reputation for those qualities that appeal to the discerning saw user, and the demand for them is increasing greatly. For the past six months the Southern Saw Works' business has been the largest it ever handled, despite the fact that prices have advanced in the materials and labor it uses and selling prices on its product remained at the same figures. Millmen who are not acquainted with the company's saws are invited to investigate.

Crocker-Wheeler Machinery.—The machinery built by the Crocker-Wheeler Company, manufacturer and electrical engineer of Amherst, N. J., is increasing rapidly in popularity. Some of the most prominent machinery establishments in the country are using the company's machines. The Frick Company of Waynesboro, Pa., has ordered from the Crocker-Wheeler Company a size 448 engine-type generator, 400-kilowatt at 250 volts, and a size 100 D compound generator, belt type, together with switchboard. Another order came from the Philadelphia (Pa.) Engineering Works to supply motors for cranes, these motors to be 30-horse-power standard ironclad size 22 mill motors, 15-horse-power standard ironclad size 14 mill motors, and 15-horse-power standard ironclad size 14 and seven-horse-power standard ironclad size 6 mill motors. Another order received is to equip electrically the shops of the Chicago, Burlington & Quincy Railroad at Hannibal, Mo. This order calls for fifty-five motors of various sizes from one horse-power to fifty horse-power, and aggregating 440 horse-power. Many of these machines are of the Crocker-Wheeler Company's new form "F," semi-enclosed, sizes 3, 5 and 7½, and several twenty-five and thirty-five horse-power enclosed motors.

To Manufacture Metal Goods.—The demand for metal novelties, sheet-metal stampings and other metal goods is constantly bringing into the field new companies aiming to supply the demand. The present industrial prosperity of the country has caused increasing consumption of the goods mentioned, and large quantities are required to meet the requirements of trade. The Bliss-Chester Company of Providence, R. I., has been formed by Milford E. Bliss and John Chester to enter into the trade mentioned. This company will manufacture metal novelties, sheet-metal stampings, electrical and hardware specialties made in brass, copper and aluminum, sheet steel and malleable iron and screw-machine products. A specialty will be made of brass shells, although the company's plant is fully equipped to produce all kinds of cupped work, caps, steel-metal stampings and screw-machine products. Mr. Bliss will call upon the trade to solicit orders. He was connected for nine years with the Mossberg Wrench Co., and later with the Mossberg & Granville Manufacturing Co. Mr. Chester will superintend the manufacture of the company's goods. He was connected with the Waterburg Brass Co. for some years, and later was superintendent of the Providence Gas Burner Co. It is evident from the experience of the members of the company that it will be completely qualified, with its extensive modern works, to manufacture a line of the goods it intends to offer of the highest grade.

Graphite for Automobiles.—Graphite, which plays an important part in the mechanical arts of the world, is found very useful in reducing friction in automobiles. It is said that a very finely powdered graphite, when introduced into the cylinders of either steam or gas automobiles, very largely assists the oil which is usually em-

ployed for the purpose of lubrication. It seems to be agreed by all engineers that no vegetable or animal oil should be used for the lubrication of engine cylinders. Mineral oil only should be used, but even the best mineral oil in the cylinders of gas engines chars under very high heat, due to the combustion of gases. The heat in a gas-engine cylinder is said to be from 1200 to 2000 degrees F., and graphite only is able to bear this extreme heat. Special graphite lubricants are prepared for the gears of both electric, steam and gas motors. For the driving chains on steam or gas automobiles graphite in some form should always be used, as it saves power and at the same time so thoroughly lubricates the links that it will prevent the chains from breaking. When used for the chain the graphite should not be used with any grease, as the sticky grease causes the dust and dirt to adhere to the chain, thereby practically shortening the chain and making it unnecessarily tight. The graphite should be used with a nice quality of vaseline or should be mixed with gasoline or turpentine and applied to the chain. The gasoline or turpentine will evaporate, leaving a thin coating of graphite on the chain. Those interested in the subject of graphite lubrication should write to the Joseph Dixon Crucible Co., Jersey City, N. J., for further information.

TRADE LITERATURE.

Concrete Mixers.—The demand for an efficient concrete mixer resulted in the introduction of a machine found to possess all the desirable qualities called for. This machine is Ransome's patent concrete mixer, made by the Ransome & Smith Co. of 17 Ninth street, Brooklyn, N. Y. A booklet illustrates and describes the mixer. Copies on application.

Plain Grinding Machine.—One of the most useful machines finding a place in machine shops and various other industrial establishments is the grinding machine. The Landis Tool Co. of Waynesboro, Pa., manufactures a line of these machines. Its No. 16 plain grinding machine, with automatic feeds, has eight-inch swing, seventy-two inches between centers. Leaflet just issued illustrates and describes the machine.

Superior Graphite Paint.—Protective coatings for metal, wood and other exposed surfaces are in great demand. Such coatings are on the market in numbers, and give varying satisfaction to their users. The Detroit (Mich.) Graphite Manufacturing Co. manufactures a superior graphite paint that excels as a coating for exposed surfaces, and it has issued a booklet telling of the many meritable qualities of the paint, its method of use, how it is manufactured and other pertinent points of information.

Soft-Mud Brick Machinery.—There are various methods of making brick, one of which is the soft-mud process. This process is absolutely indispensable in some clays. Clays of a short sandy nature, or those with a disposition to excessive lamination by the stiff plastic process are readily treated by the soft-mud system. The result is a sand-face brick of good appearance. The C. W. Raymond Co. of Dayton, Ohio, builds a line of machinery for the soft-mud process, which is illustrated and explained in a recent catalogue. Interested parties may obtain catalogue on request.

Largest Fans in the World.—The centrifugal fan is constantly being more and more used as a producer of draft for industrial plants. The efficiency of the centrifugal fan has been long established. The New York Blower Co. of Bucyrus, Ohio, builds fans of all sizes for draft-producing purposes. A leaflet just issued by the company presents some data regarding such fans, together with an illustration of two of the largest mechanical-draft fans ever built in the world. They were built by the New York Blower Co. New York office is at 39 Cortlandt street, and Boston office at 185 Summer street.

Burr Keysenters.—It will be readily conceded that a machine that efficiently cuts keyseats in shafting without removing the latter from its hangers or boxes is a valuable tool. Such a tool is found in the Burr portable shaft keyseater. Mill-repair shops, power-transmission-plant builders, the large and small machine shops and other establishments have received this machine favorably. Messrs. John T. Burr & Son of Kent avenue and South Sixth street, Brooklyn, N. Y., manufacture the keyseater mentioned, as well as stationary shaft keyseaters, portable and stationary bore keyseaters, broaching machines, universal and plain hand lathes, special machinery and tools.

Descriptive booklet may be had upon application.

Enamelled and Stamped Ware.—Thousands of utensils manufactured by modern enameling and stamping processes have entered into household and industrial life. For household purposes especially is stamped and enameled ware made in a variety of such character as to fill all requirements. American manufacturers have established the most extensive and perfected enameled and stamped ware factories, and have from time to time introduced new machinery for producing their goods, which latter are sold all over the world. The seven leading plants of this character were organized last year into the National Enameling & Stamping Co. of Milwaukee, Wis., and the company has issued its complete catalogue. This catalogue is the largest and most comprehensive of its character ever issued, containing as it does 648 pages, wherein are 3500 illustrations of the articles catalogued. Many of the items listed are shown to the trade for the first time. Attention is especially called to the lithographed pages showing patent genuine granite steelware, also Venetian and brilliant enameled steelware in their natural colors. The catalogue is divided into departments covering the miscellaneous line of tin, copper, steel and brassware articles manufactured in the company's seven factories, which includes the Huberman Manufacturing Co., New York; Kleckhofer Bros. Co., Milwaukee; St. Louis Stamping Co., St. Louis; Matthai-Ingram Co., Baltimore; American Stamping Co., Brooklyn; Eastern Tinware Co., Portland, and Stewart Enamel Co., Bellaire. Copies of the catalogue can be obtained by the trade upon request to the Milwaukee office.

Among the features of the August number of Frank Leslie's Popular Monthly are stories by F. Hopkinson Smith, A. Conn Doyle, Mary E. Wilkins, Edgar Fawcett, Alex John, Marietta Holly ("Josiah Allen's Wife") and R. K. Munkittrick; illustrated articles by the Infanta Eulalie of Spain, Capt. Robert E. Lee and the Rev. W. B. Rankin, and poems by Harriet Prescott Spofford, Edith M. Thomas, Samuel Minturn Peek, Ethel Morse, Frank L. Stanton, William Hamilton Hayne, Madison Cawein, Henry Tyrrell, Martha McCulloch-Williams, Hattie Whitney, Roy Farrell Greene and Wallace Dunbar Vincent.

Tickets from Philadelphia to New York on Sale at Pennsylvania Railroad Ticket Offices in Baltimore and Washington.

In order to accommodate persons holding thousand-mile tickets and other forms of transportation valid to Philadelphia, who may desire to check baggage through and reserve sleeping and parlor-car accommodations to New York, the Pennsylvania Railroad Co., beginning July 23, will place on sale at its ticket offices in Washington and Baltimore one-way tickets from Philadelphia to New York at rate of \$2.50. Agents in New York will also be instructed to sell similar tickets from New York to Philadelphia in connection with tickets from Philadelphia to points south or west thereof on Pennsylvania Railroad.

Last Summer Tour to the North—Tour to Canada via Pennsylvania Railroad.

The last tour to the North for the summer of 1900 via the Pennsylvania Railroad to Canada and Northern New York will leave August 11. The places visited include Niagara Falls, Thousand Islands, Rapids of the St. Lawrence, Quebec, The Saguenay, Montreal, Au Sable Chasms, Lakes Champlain and George, and Saratoga, the trip occupying fifteen days; round-trip rate \$125.

The tour will be in charge of one of the company's tourist agents, assisted by an experienced lady as chaperon, whose special charge will be unescorted ladies. The rate covers railway and boat fare for the entire round trip, parlor-car seats, meals en route, hotel entertainment, transfer charges and carriage hire.

For detailed itinerary, tickets or any additional information, address tourist agent, Pennsylvania Railroad Co., 1195 Broadway, New York; 860 Fulton street, Brooklyn; 789 Broad street, Newark, N. J., or Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

Messrs. Rouse Bros. have decided to open a bank at La Grange, N. C., about August 1.

It is reported that another bank is to be organized at Moultrie, Ga., by J. T. Monk and others.

F. A. Thayer and James A. Hayden are interested in the First National Bank, recently organized at Oakland, Md.

J. L. Cunningham is vice-president of the national bank recently organized at Mineral Wells, Texas, with \$25,000 capital stock.

James S. P. Watson and Cornelius Thomas are interested in the Citizens' Exchange Loan Association organized at Jacksonville, Fla.

Charles C. Caldwell and J. H. Roland are interested in the National Bank of Port Deposit, Md., recently organized with \$50,000 capital stock.

The First National Bank has been organized at Venus, Texas, with \$25,000 capital. J. C. Smyth is president; S. E. Moss, vice-president, and S. C. Marshall, cashier.

New Securities.

L. Lindsay has purchased the issue of \$17,000 in 5 per cent. bonds of Escambia county, Alabama, paying 102.941.

Bids will be received until August 15 for the issue of \$300,000 in 5 per cent. bonds of Galveston, Texas. Address the mayor.

The town of Kirkwood, Mo., has voted in favor of issuing \$17,000 in bonds for improvements. The mayor may be addressed.

The Gibbs National Bank of Huntsville, Texas, has purchased the issue of \$3400 worth of 6 per cent. bonds of Madisonville, Texas.

The Newport News & Old Point Railway & Electric Co. at its last meeting decided to increase its capital stock from \$500,000 to \$700,000.

It is stated that the town of Morrilton, Ark., has determined to issue \$32,000 in bonds for improvements. The mayor may be addressed.

The city council of Birmingham, Ala., has authorized the proposed issue of \$269,000 in bonds, recently referred to in the Manufacturers' Record.

Lafayette parish, Louisiana, has been authorized by the legislature to issue \$32,000 in bonds. The parish authorities may be addressed at Lafayette, La.

The issue of \$15,000 in 5 per cent. bonds of Greenwood, Miss., has not been sold, and will be offered at a meeting of the town council on August 7. J. L. Gillespie is county clerk.

Dividends and Interest.

The Consumers' Mineral Water Co. of New Orleans has declared a dividend of \$5 per share.

The Conowingo Bridge Co. of Conowingo, Md., has declared a dividend of \$11 per share.

Financial Notes.

In the past two years \$200,000 of the public debt of Florida has been paid from the general revenue fund, and a reduction of the State tax levy has also been made.

According to the report of the corporation committee of North Carolina, the

capital of the State, private and savings banks aggregates \$2,651,000, of which \$2,217,000 are represented in State banks. There are fifty-five State banks, twenty-six private banks and nine savings banks.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending July 31.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	98	100
Alken Mfg. Co. (S. C.)	96	99
Anderson Cotton Mills (S. C.)	124	130
Arkwright Mills (S. C.)	125	130
Augusta Factory (Ga.)	85	88
Avondale Mills (Ala.)	80	83
Belton Mills (S. C.)	104	105
Bennettsville Mfg. Co. (S. C.)	114	117½
Cabarrus Cotton Mills (N. C.)	150	160
Cannon Mfg. Co. (N. C.)	160	185
Clifton Mfg. Co. (S. C.)	185	192
Courtenay Mfg. Co. (S. C.)	119	120
Darlington Mfg. Co. (S. C.)	96	100
Delgado Mills (N. C.)	102	103
Dilling Cotton Mills (N. C.)	194	197
Eagle & Phenix Mills (Ga.)	105	108
Enoree Mfg. Co. (S. C.)	120	126
Enterprise Mfg. Co. (Ga.)	100	104
F. W. Poe Mfg. Co. (S. C.)	117	119½
Gaffney Mfg. Co. (S. C.)	122	124½
Granby Mills (S. C.)	100	102
Graniteville Mfg. Co. (S. C.)	165	170
Greenwood Cotton Mills (S. C.)	100	104
Grendel Mills (S. C.)	101½	103½
Henderson Cotton Mills (N. C.)	120	125
Henrietta Mills (N. C.)	205	210
John P. King Mfg. Co. (Ga.)	101½	104
Langley Mfg. Co. (S. C.)	118	125
Laurens Cotton Mills (S. C.)	141	145
Lockhart Mills (S. C.)	111	113
Louise Mills	129	135
Lynchburg Cotton Mill Co. (Va.)	125	130
Lynchburg Cot. Mill Co. (Va.) Pfd.	145	150
Mills Mfg. Co. (S. C.)	94	100
McColl Mfg. Co. (S. C.)	123	126
Modena Cotton Mills (N. C.)	140	145
Newberry Cotton Mills (S. C.)	123	125
Odell Mfg. Co. (N. C.)	112	115
Orr Mfg. Co. (S. C.)	104	106
Pacolet Mfg. Co. (S. C.)	255	275
Pelzer Mfg. Co. (S. C.)	185½	190
Piedmont Mfg. Co. (S. C.)	183	187½
Raleigh Cotton Mills (N. C.)	120	125
Richland Cotton Mills (S. C.)	100	102
Roanoke Mills (N. C.)	106	108
Siler Mfg. Co. (Ga.)	85	90
Southern Cotton Mills (N. C.)	95	98
Spartan Mills (S. C.)	132	140
Trion Mfg. Co. (Ga.)	125	150
Tuckapan Mills Co. (S. C.)	125	130
Union Cotton Mills (S. C.)	132	138
Union Cotton Mills (S. C.) Pfd.	102	103½
Victor Cotton Mills (S. C.)	110	114
Warren Mfg. Co. (S. C.)	85	90
Warren Mfg. Co. (S. C.) Pfd.	101½	103
Whitney Mfg. Co. (S. C.)	125	130
Wilmington Cot. Mills (N. C.) Pfd.	110	115
Wiscasset Mills (N. C.)	121	126

Quotations Furnished by William S. Glenn, Spartanburg, S. C., for Week Ending August 1.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	95	100
American Spinning Co. (S. C.)	100	101
Anderson Cotton Mills (S. C.)	125	130
Arkwright Mills (S. C.)	127	130
Belton Mills (S. C.)	104	105
Brandon Mills (S. C.)	90	100
Clifton Mfg. Co. (S. C.)	185	192
Clinton Mills (S. C.)	115	125
Darlington Mfg. Co. (S. C.)	96	101
Dilling Mfg. Co. (S. C.)	104	110
F. W. Poe Mfg. Co. (S. C.)	117	119
Gaffney Mfg. Co. (S. C.)	125	127
Greenwood Mills (S. C.)	102	105
Grendel Mills (S. C.)	101	105
Laurens Mills (S. C.)	140	145
Lockhart Mills (S. C.)	109	112
Mills Mfg. Co. (S. C.)	94	95
Monaghan Mills (S. C.)	90	100
Newberry Mills (S. C.)	120	125
Odell Mfg. Co. (N. C.)	112	116
Orr Mfg. Co. (S. C.)	104	105
Pacolet Mfg. Co. (S. C.)	250	275
Pelzer Mfg. Co. (S. C.)	185	190
Piedmont Mfg. Co. (S. C.)	180	185
Richland Mills (S. C.)	99	101
Southern Mills (S. C.)	95	98
Spartan Mills (S. C.)	130	135
Tuckapan Mills (S. C.)	125	132
Union Mills (S. C.)	130	133
Victor Mfg. Co. (S. C.)	112	115
Whitney Mfg. Co. (S. C.)	125	130

Niagara Falls Excursions—Low-Rate Vacation Trips via Pennsylvania Railroad.

The Pennsylvania Railroad Co. has selected the following dates for its popular ten-day excursions to Niagara Falls from Baltimore: July 26, August 9 and 23, September 6 and 20, and October 4 and 18. On these dates the special train will leave Baltimore 9.05 A. M.

Excursion tickets, good for return passage on any regular train, exclusive of limited express trains, within ten days, will be sold at \$10 from Baltimore, and at proportionate rates from other points. A stop-over will be allowed at Buffalo, Rochester, Canandaigua and Watkins within the limit returning on the excursions of July 26, August 9, September 6, October 4 and 18.

For the excursions of August 23 and September 20 stop-over will be allowed at Buffalo on return trip within limit of ticket.

The special trains of Pullman parlor cars and day coaches will be run with each excursion running through to Niagara Falls. An extra charge will be made for parlor-car seats.

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An experienced tourist agent and chaperon will accompany each excursion.

For descriptive pamphlet, time of connecting trains and further information apply to nearest ticket agent, B. Courlander, Jr., passenger agent, Baltimore district, Baltimore, Md., or address Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

Reduced Rates to Chicago via Pennsylvania Railroad, Account G. A. R. Encampment.

On account of the Thirty-fourth Annual Encampment of the Grand Army of the Republic, to be held at Chicago, August 27-31, inclusive, the Pennsylvania Railroad Co. will sell excursion tickets from points on its line to Chicago at rate of single fare for the round trip.

Tickets will be sold on August 25, 26 and 27, good to return until August 31, inclusive; but by depositing ticket with joint agent at Chicago prior to noon of September 2, and the payment of fifty cents, return limit may be extended to September 30, inclusive.